

EXHIBIT C
Preliminary Claim Charts

Index

'581 Patent – Claim 1 2

'590 Patent – Claim 1 14

'560 Patent – Claim 1 24

'191 Patent – Claim 1 35

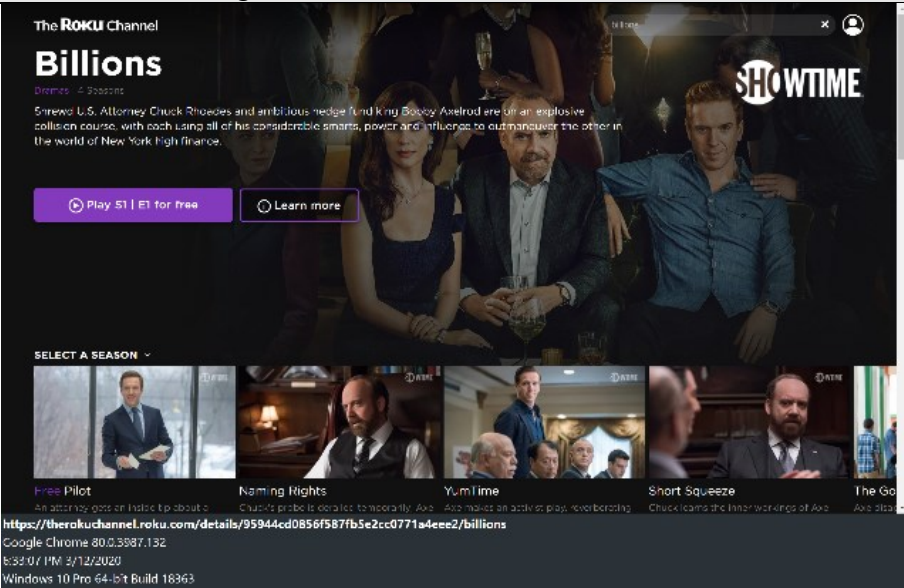
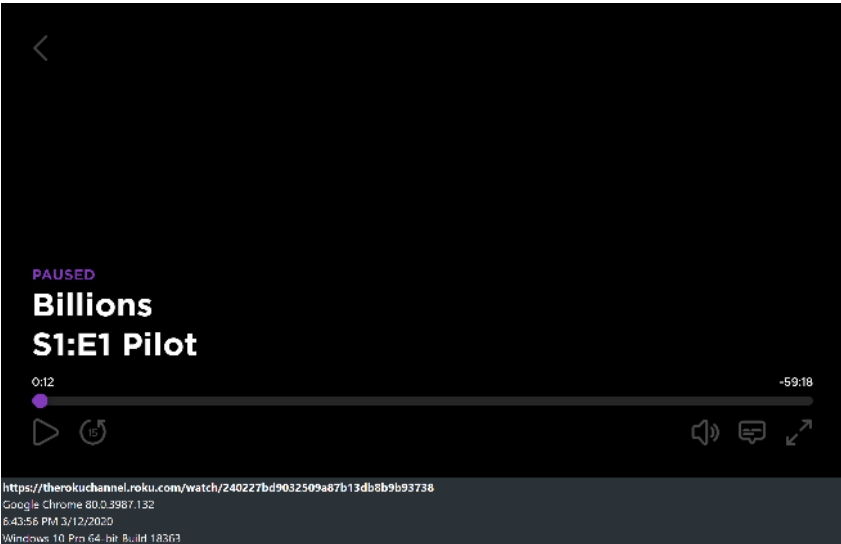
'691 Patent – Claim 1 52

'154 Patent – Claim 1 68

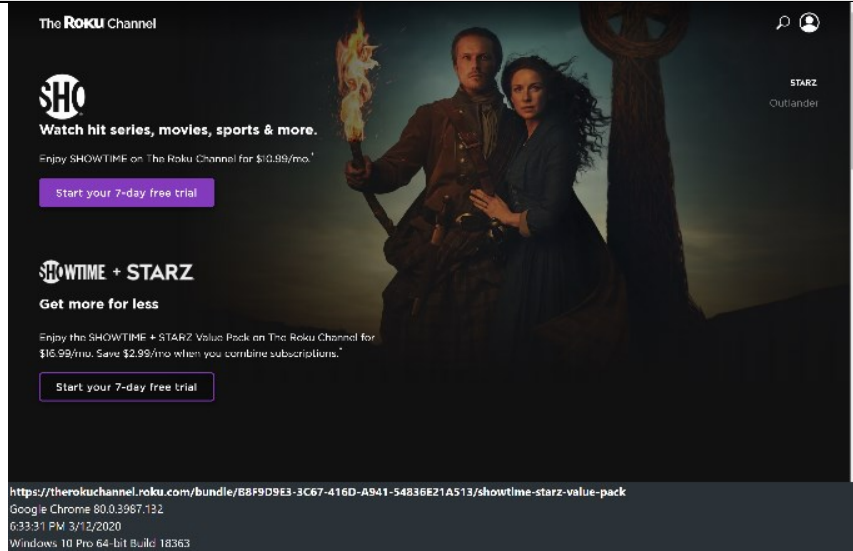
'581 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
1[preamble]	A computer implemented method for providing a multimedia hardware device to generate an authorized reproduction of a media content item included in a digital media file, <i>comprising</i> :	<p>“A Roku Account give you access to movies, television shows and other audio-visual entertainment in the ‘Roku Channel Store’, a storefront of applications provided by Roku via your device’s on-screen menu, as well as through ‘The Roku Channel’, Roku’s own streaming video service.” https://docs.roku.com/published/usertermsandconditions/en/us</p> <p>“Roku doesn't store most of its content, but streams it directly, eliminating the need for large amounts of internal storage.” https://electronics.howstuffworks.com/gadgets/other-gadgets/roku-streaming-stick1.htm</p> <p>“A Roku TV is a standalone smart TV with built-in TV display and a simple, intuitive interface that lets you stream content over the internet from services such as Netflix, ESPN, and HBO, without needing to connect any additional devices. Roku TV also works like a regular TV, allowing you to connect an HDTV antenna to watch live television, or plug in external devices like a cable set-top box or Blu-ray™ player.” https://support.roku.com/article/209403268</p>
1[a]	loading a digital media file for reproduction, wherein the digital media file includes the media content item;	<p>“Roku devices give you access to 500,000+ movies and TV episodes from top free and paid channels, so you can stream almost anything....” https://www.roku.com/en-gb/how-it-works</p>
1[b]	analyzing the digital media file to identify digital media information associated with the media content item;	<p>“Stream top free or paid programming from services like Netflix, Amazon Prime Video, Hulu, Google Play, HBO, SHOWTIME, PBS, and The Roku Channel. Thousands more channels for sports, news, international, and kids programming plus broadcast channels like ABC, NBC, CBS, and FOX. And major music services like Pandora and Sirius XM are available.” https://www.roku.com/en-gb/how-it-works</p>

'581 Patent – Claim 1
Preliminary Claim Chart

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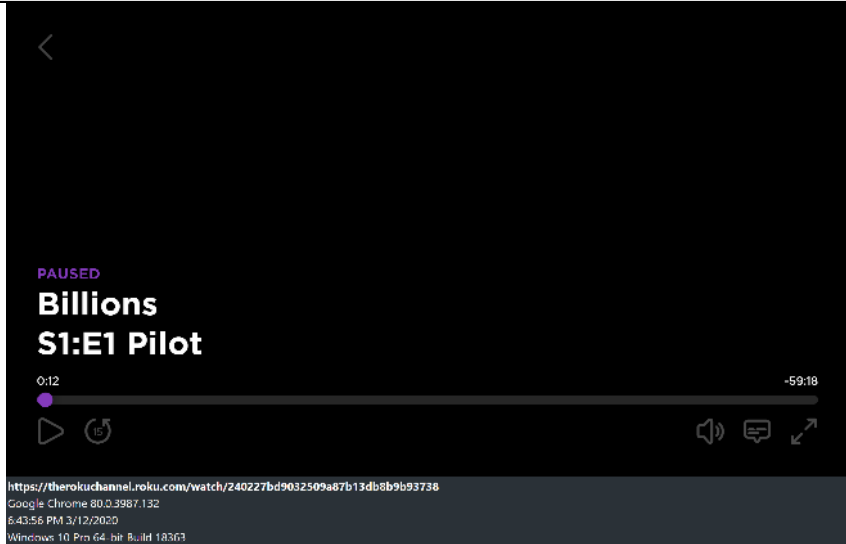
'581 Patent – Claim 1
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		 <p>The Roku Channel</p> <p>SHO</p> <p>Watch hit series, movies, sports & more.</p> <p>Enjoy SHOWTIME on The Roku Channel for \$10.99/mo.*</p> <p>Start your 7-day free trial</p> <p>SHOWTIME + STARZ</p> <p>Get more for less</p> <p>Enjoy the SHOWTIME + STARZ Value Pack on The Roku Channel for \$16.99/mo. Save \$2.99/mo when you combine subscriptions.*</p> <p>Start your 7-day free trial</p> <p>https://therokuchannel.roku.com/bundle/88F9D9E3-3C67-416D-A941-54836E21A513/showtime-starz-value-pack</p> <p>Google Chrome 80.0.3967.132 6:33:31 PM 3/12/2020 Windows 10 Pro 64-bit Build 18363</p> <p>See also https://developer.roku.com/docs/features/monetization/billing.md</p> <p>See also https://developer.roku.com/docs/developer-program/roku-pay/implementation/overview.md</p>
1[c]	receiving a license request from a user requesting to engage in a license transaction to reproduce the media content item;	See Evidence of Use for Claim Restriction 1[b]
1[d]	evaluating the license transaction to determine whether the user has acquired a license to reproduce the media content item;	<p>See Evidence of Use for Claim Restriction 1[b]</p> <p>“The ChannelStore node and Roku Pay web services are used together to manage the on-device authentication and entitlements in channels. When the channel is launched, the channel sends the ChannelStore node's getAllPurchases command to retrieve the customer's existing subscription purchase (if any). The transaction ID for that subscription is</p>

'581 Patent – Claim 1
Preliminary Claim Chart

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		<p>passed into Roku Pay's validate-transaction API to confirm whether the customer is still entitled to it. If the <code>isEntitled</code> flag included in the API response is "true", the channel grants the customer access to content; if it's "false", the channel prompts the customer to sign up for a subscription product (see the next section for how to implement the signup workflow). The result is a seamless, authentication workflow that requires no user interaction.”</p> <p>https://developer.roku.com/docs/developer-program/roku-pay/implementation/overview.md</p> <p><i>See also</i> https://developer.roku.com/docs/features/monetization/billing.md</p>
1[e]	accessing a licensing database to determine whether the user is licensed to reproduce the media content item based on the digital media platform;	See Evidence of Use for Claim Restrictions 1[b] and 1[d]
1[f]	reproducing the media content item when the user is licensed to reproduce the media content item based on the digital media information;	See Evidence of Use for Claim Restriction 1[b]

'581 Patent – Claim 1
Preliminary Claim Chart

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1[g]	after the evaluation of the license transaction, extracting from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner of the media content item to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for is the media content item of the copyright owner;	<p>“We receive information about your interactions with the Roku Services, such as your ... interactions with content and advertisements.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“We receive information about your activities within Roku’s Channels and Roku Direct Publisher Channels ..., like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files your play through the Roku Media Player.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Roku collects information about your online activities, including videos you search for and view, when you use Roku’s mobile app, in order to show you advertisements that we think may interest you on Roku’s and</p>

'581 Patent – Claim 1
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		<p>third parties' online services, and for the other online advertising purposes.” https://docs.roku.com/published/mobileoptout/en/us</p> <p><i>See</i> Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198.</p> <p>“When you choose to use your voice to control your Player, you agree that Roku and third parties who fulfill your requests and/or provide services for us have your consent to record, process and store your voice inputs (e.g., a recording and the interpretation of what was said), and use such voice inputs with other information about your Player (e.g., device identifier) to provide services to you, to improve the accuracy and quality of the service, and as described in Roku’s Privacy Policy.” https://docs.roku.com/published/deviceplayereula/en/us</p> <p><i>See also</i> https://docs.roku.com/published/mobileapptermsfuse/en/us</p>
1[h]	aggregating the user data into a statistics record for the license request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the license request;	<p>“Viewership Details table The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that</p>

'581 Patent – Claim 1
Preliminary Claim Chart

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		<p>channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.</p> <p>The number of streams can be expected to be higher in channels with shorter form content, such as 1-5 minute user-generated videos, than in channels with longer form content, such as feature length films.</p> <p>Streams can generally be expected to exceed visits. If visits exceeds streams, that would indicate account holders are starting your channel, then exiting without ever streaming any content. https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p>

'581 Patent – Claim 1
Preliminary Claim Chart

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		<p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md</p> <p>“Information collected by Roku is used for the following purposes: ... 2. Improvement of Products and Services: to understand and analyze our user base and how you use the Roku Services, and to improve and enhance the Roku Services, and to develop new products, services, features and functionality; ... 4. Advertising: to show you advertising, including personalized advertising, on the Roku Services, Third-Party Channels, and on third-party websites, mobile apps, platforms and devices, and to measure and understand the reach, viewership, and effectiveness of such advertising; 5. Marketing and Promotions: for marketing purposes, including sending you emails and text messages about products, events, promotions and offers from Roku or its partners or advertisers, and understanding the effectiveness of our marketing; 6. Analytics and Performance: to measure performance and analyze key metrics relevant to our business...” http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Advertising Partners - We work with advertising partners to show you advertisements that we think may interest you on Roku Services and on other companies’ websites, apps, and devices. These advertising partners</p>

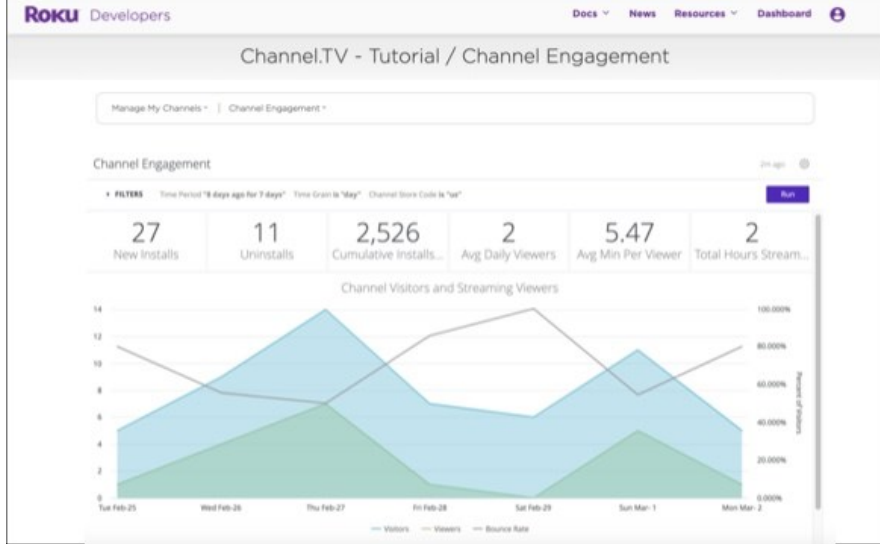
'581 Patent – Claim 1
Preliminary Claim Chart

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		<p>may set and access their own cookies, pixel tags and similar technologies on the Roku Services and they may otherwise collect or have access to information about you which they collect over time and across different online services and devices.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p>
1[i]	storing in the license database the statistics record so that the user data is accessible to the copyright owner of the media content item;	<p>“We use industry-standard methods of securing electronic databases of personal information.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Channel Engagement report The Channel Engagement report is the default that displays when you choose View Analytics. Use this report to grow your audience by analyzing data about streaming activity and the size of your install base. ...</p> <p>Summary statistics The band of metrics below FILTERS shows the summary statistics based on the time period you select in FILTERS:</p> <p>New Installs - total count of new unique accounts during the selected Time Period. Uninstalls - total count of accounts uninstalled during the selected Time Period. Cumulative Installs To-Date - count of unique accounts that that have installed your channel to-date; roughly equivalent to the size of your install base. When users uninstall and re-install a channel, this is credited as one net new installation and will increase the Cumulative Installs To-Date. Average Daily Viewers - average number of daily views similar to DAU "daily active users." Changing Time Grain will not effect this measurement. Average Minutes Per Viewer - average number of minutes streamed per</p>

'581 Patent – Claim 1
Preliminary Claim Chart

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		<p>unique streaming accounts. Total Hours Streamed - total hours streamed during the selected Time Period.” https://developer.roku.com/docs/features/analytics/channel-engagement.md</p> <p>“However Roku doesn’t sell most of the ads that run on its platform; most of it is sold by the publishers on the platform, said Roku gm of platform Scott Rosenberg on the earnings call.</p> <p>Enabling publishers to control ad sales on their channels has helped Roku to win favor with media companies, especially as more launch their own OTT apps. In June the company debuted Roku Audience Marketplace, a program for publishers to sell ads in their Roku channels that can be targeted using Roku’s first-party data and ad tech. And Roku has played a supporting role by selling ads for smaller publishers’ channels and splitting that revenue and striking deals with larger publishers to sell some of their inventory or to fill their unsold inventory.” https://digiday.com/future-of-tv/rokus-advertising-business-outpacing-hardware-business/</p>

'581 Patent – Claim 1
Preliminary Claim Chart

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		 <p>https://developer.roku.com/docs/direct-publisher/tutorial/analytics.md</p>
1[]	analyzing a plurality of statistics records aggregated from each license request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item when the license is acquired by the user and when the license is declined by the user;	<p>“Information collected by Roku is used for the following purposes: ... 2. Improvement of Products and Services: to understand and analyze our user base and how you use the Roku Services, and to improve and enhance the Roku Services, and to develop new products, services, features and functionality; ... 4. Advertising: to show you advertising, including personalized advertising, on the Roku Services, Third-Party Channels, and on third-party websites, mobile apps, platforms and devices, and to measure and understand the reach, viewership, and effectiveness of such advertising; 5. Marketing and Promotions: for marketing purposes, including sending you emails and text messages about products, events, promotions and offers from Roku or its partners or advertisers, and understanding the effectiveness of our marketing; 6. Analytics and Performance: to measure performance and analyze key metrics relevant to our business....”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p>

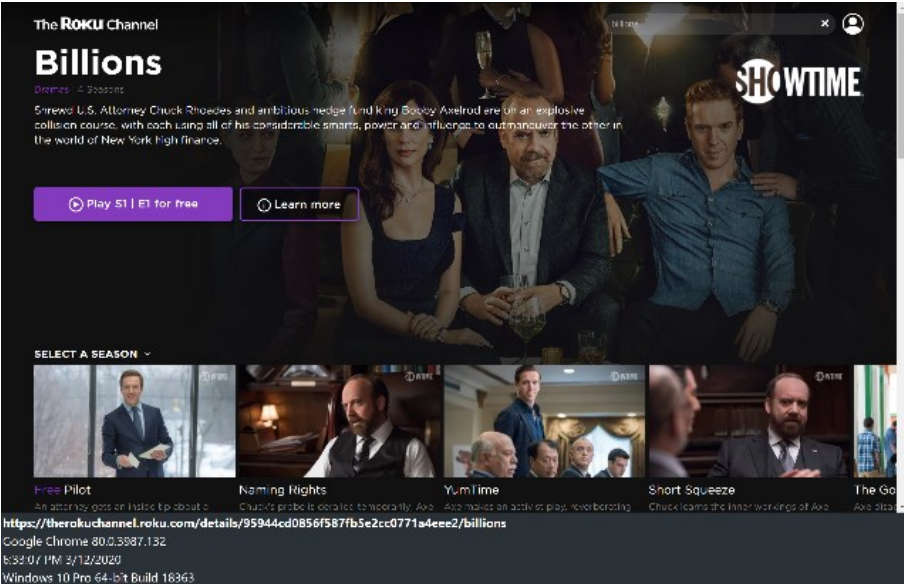
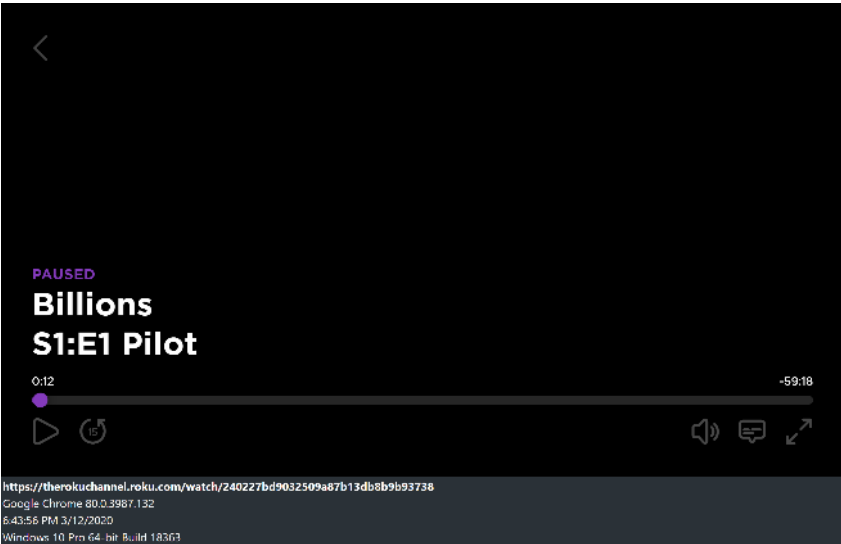
'581 Patent – Claim 1
Preliminary Claim Chart

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		<p>“Channels have access to web-based channel analytics through Roku's Developer Dashboard. This allows you to analyze your channel's health, viewership trends, and metrics for specific titles and devices.</p> <p>As a service to our partners, Roku provides some basic analytics for all channels on the platform in the form of standardized dashboards with metrics on channel health, viewership and engagement, and so forth. Dashboards are read-only - meaning users cannot modify the dashboards themselves (apart from applying filters), create new dashboards, or change any of the underlying data. Also, the channel data displayed are restricted to channel owners. You will never see data pertaining to channels other than your own, and Roku will never share your channel data with other channel owners. Roku evaluates making changes to the available dashboards on an ongoing basis, based on feedback from our channel partners. Access to some dashboards may be restricted based on the size of the business relationship.”</p> <p>https://developer.roku.com/docs/features/analytics/analytics-reports.md</p>

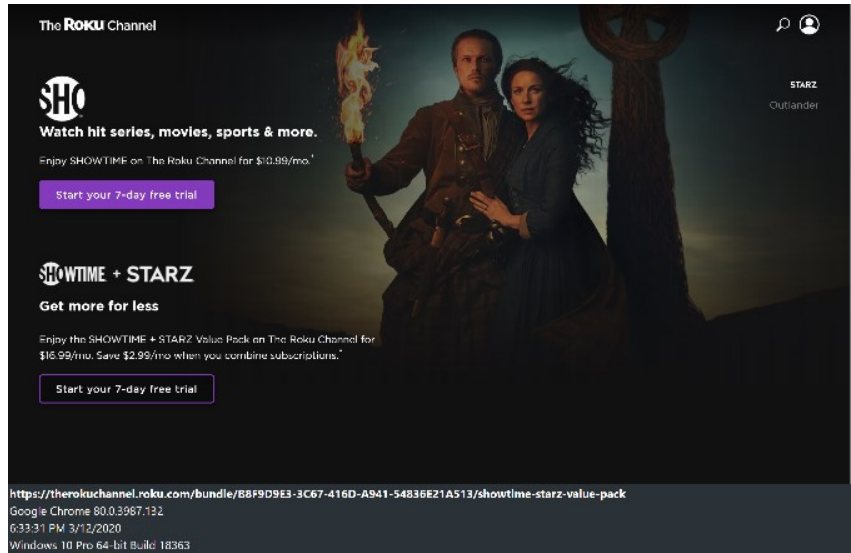
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Claim Element	Claim Restriction	Evidence of Infringement
1[preamble]	A computer implemented method for providing a multimedia hardware device to generate an authorized reproduction of a media content item included in a digital media file, <i>comprising</i> :	<p>“A Roku Account give you access to movies, television shows and other audio-visual entertainment in the ‘Roku Channel Store’, a storefront of applications provided by Roku via your device’s on-screen menu, as well as through ‘The Roku Channel’, Roku’s own streaming video service.” https://docs.roku.com/published/usertermsandconditions/en/us</p> <p>“Roku doesn't store most of its content, but streams it directly, eliminating the need for large amounts of internal storage.” https://electronics.howstuffworks.com/gadgets/other-gadgets/roku-streaming-stick1.htm</p> <p>“A Roku TV is a standalone smart TV with built-in TV display and a simple, intuitive interface that lets you stream content over the internet from services such as Netflix, ESPN, and HBO, without needing to connect any additional devices. Roku TV also works like a regular TV, allowing you to connect an HDTV antenna to watch live television, or plug in external devices like a cable set-top box or Blu-ray™ player.” https://support.roku.com/article/209403268</p>
1[a]	receiving a license request from a user requesting to engage in a license transaction to reproduce a media content item;	<p>“Roku devices give you access to 500,000+ movies and TV episodes from top free and paid channels, so you can stream almost anything....” https://www.roku.com/en-gb/how-it-works</p>
1[b]	evaluating the license transaction to determine whether the user has acquired a license to reproduce the media content item;	<p>“Stream top free or paid programming from services like Netflix, Amazon Prime Video, Hulu, Google Play, HBO, SHOWTIME, PBS, and The Roku Channel. Thousands more channels for sports, news, international, and kids programming plus broadcast channels like ABC, NBC, CBS, and FOX. And major music services like Pandora and Sirius XM are available.” https://www.roku.com/en-gb/how-it-works</p>

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Preliminary Claim Chart

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		 <p>The screenshot shows the Roku Channel interface for the TV show 'Billions'. The page features a large hero image with the show's title 'Billions' and a description: 'Screwed U.S. Attorney Chuck Rhoades and ambitious hedge fund King Bobby Axelrod are on an explosive collision course, with each using all of his considerable smarts, power and influence to outmaneuver the other in the world of New York high finance.' Below the description are two buttons: 'Play S1 E1 for free' and 'Learn more'. A 'SELECT A SEASON' dropdown menu is visible, followed by a row of episode thumbnails including 'Free Pilot', 'Naming Rights', 'Yum! Time', 'Short Squeeze', and 'The Go'. The URL bar at the bottom shows 'https://therokuchannel.roku.com/details/95944cd0856f587fb5e2cc0771a4ee2/billions'.</p>  <p>The screenshot shows the Roku Channel video player interface for the 'Billions S1:E1 Pilot'. The video is paused at 0:12. The player controls include a progress bar, a play button, a volume icon, a speech bubble icon, and a full screen icon. The URL bar at the bottom shows 'https://therokuchannel.roku.com/watch/240227bd9032509a87b13db8b9b93738'.</p>

'590 Patent – Claim 1
Preliminary Claim Chart

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		 <p>The screenshot shows the Roku Channel interface with a dark background featuring a man and a woman. It promotes Showtime and Starz subscriptions with a 7-day free trial offer. The URL at the bottom is https://therokuchannel.roku.com/bundle/BBF9D9E3-3C67-416D-A941-54836E21A513/showtime-starz-value-pack. The browser information at the bottom indicates Google Chrome 80.0.3967.132 on Windows 10 Pro 64-bit Build 18363.</p>
1[c]	after the evaluation of the license transaction, extracting from the license transaction user data that is specific to the user that is attempting to reproduce the media content item when the user acquires the license and when the user declines the license, wherein the user data includes demographic data associated with the user that enables a copyright owner of the media content item to gauge a demographic that acquired the license for the media content item of the copyright owner and a demographic that declined the license for the media content item of the copyright owner;	<p>“We receive information about your interactions with the Roku Services, such as your ... interactions with content and advertisements.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“We receive information about your activities within Roku’s Channels and Roku Direct Publisher Channels ..., like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files your play through the Roku Media Player.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Roku collects information about your online activities, including videos you search for and view, when you use Roku’s mobile app, in order to show you advertisements that we think may interest you on Roku’s and</p>

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		<p>third parties' online services, and for the other online advertising purposes.” (emphasis added). https://docs.roku.com/published/mobileoptout/en/us</p> <p>See Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198.</p> <p>“When you choose to use your voice to control your Player, you agree that Roku and third parties who fulfill your requests and/or provide services for us have your consent to record, process and store your voice inputs (e.g., a recording and the interpretation of what was said), and use such voice inputs with other information about your Player (e.g., device identifier) to provide services to you, to improve the accuracy and quality of the service, and as described in Roku’s Privacy Policy.” https://docs.roku.com/published/deviceplayereula/en/us</p> <p>See also https://docs.roku.com/published/mobileapptermsfuse/en/us</p>
1[d]	aggregating the user data into a statistics record for the license request when the user acquires the license and when the user declines the license, wherein the statistics record summarizes the user data associated with the license request;	<p>“Viewership Details table The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that</p>

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		<p>channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.</p> <p>The number of streams can be expected to be higher in channels with shorter form content, such as 1-5 minute user-generated videos, than in channels with longer form content, such as feature length films.</p> <p>Streams can generally be expected to exceed visits. If visits exceeds streams, that would indicate account holders are starting your channel, then exiting without ever streaming any content. https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p>

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		<p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md</p> <p>“Information collected by Roku is used for the following purposes: ... 2. Improvement of Products and Services: to understand and analyze our user base and how you use the Roku Services, and to improve and enhance the Roku Services, and to develop new products, services, features and functionality; ... 4. Advertising: to show you advertising, including personalized advertising, on the Roku Services, Third-Party Channels, and on third-party websites, mobile apps, platforms and devices, and to measure and understand the reach, viewership, and effectiveness of such advertising; 5. Marketing and Promotions: for marketing purposes, including sending you emails and text messages about products, events, promotions and offers from Roku or its partners or advertisers, and understanding the effectiveness of our marketing; 6. Analytics and Performance: to measure performance and analyze key metrics relevant to our business....” http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Advertising Partners - We work with advertising partners to show you advertisements that we think may interest you on Roku Services and on other companies’ websites, apps, and devices. These advertising partners</p>

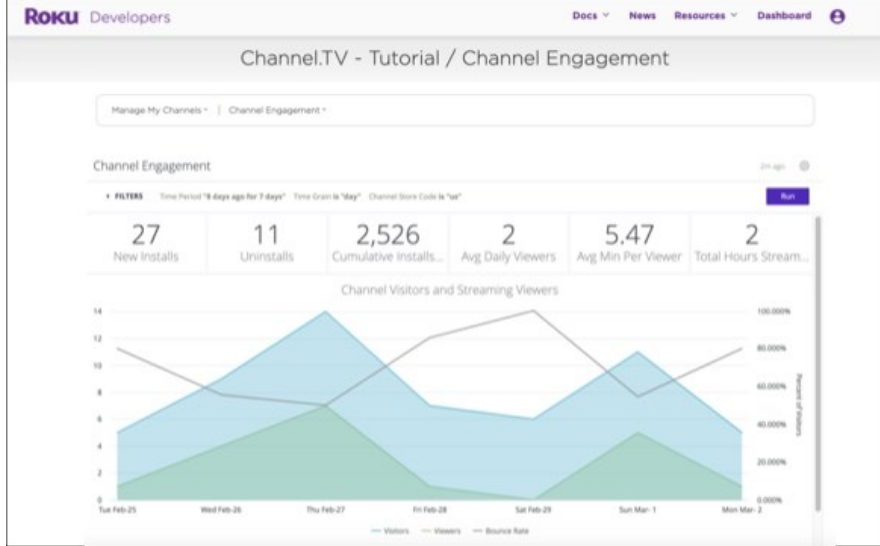
'590 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>may set and access their own cookies, pixel tags and similar technologies on the Roku Services and they may otherwise collect or have access to information about you which they collect over time and across different online services and devices.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p>
1[e]	storing in a license database the statistics record so that the user data is accessible to the copyright owner of the media content item;	<p>“We use industry-standard methods of securing electronic databases of personal information.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Channel Engagement report The Channel Engagement report is the default that displays when you choose View Analytics. Use this report to grow your audience by analyzing data about streaming activity and the size of your install base. ...</p> <p>Summary statistics The band of metrics below FILTERS shows the summary statistics based on the time period you select in FILTERS:</p> <p>New Installs - total count of new unique accounts during the selected Time Period. Uninstalls - total count of accounts uninstalled during the selected Time Period. Cumulative Installs To-Date - count of unique accounts that that have installed your channel to-date; roughly equivalent to the size of your install base. When users uninstall and re-install a channel, this is credited as one net new installation and will increase the Cumulative Installs To-Date. Average Daily Viewers - average number of daily views similar to DAU "daily active users." Changing Time Grain will not effect this measurement. Average Minutes Per Viewer - average number of minutes streamed per</p>

'590 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>unique streaming accounts. Total Hours Streamed - total hours streamed during the selected Time Period.” https://developer.roku.com/docs/features/analytics/channel-engagement.md</p> <p>“However Roku doesn’t sell most of the ads that run on its platform; most of it is sold by the publishers on the platform, said Roku gm of platform Scott Rosenberg on the earnings call.</p> <p>Enabling publishers to control ad sales on their channels has helped Roku to win favor with media companies, especially as more launch their own OTT apps. In June the company debuted Roku Audience Marketplace, a program for publishers to sell ads in their Roku channels that can be targeted using Roku’s first-party data and ad tech. And Roku has played a supporting role by selling ads for smaller publishers’ channels and splitting that revenue and striking deals with larger publishers to sell some of their inventory or to fill their unsold inventory.” https://digiday.com/future-of-tv/rokus-advertising-business-outpacing-hardware-business/</p>

'590 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		 <p>https://developer.roku.com/docs/direct-publisher/tutorial/analytics.md</p>
1[f]	analyzing a plurality of statistics records aggregated from each license request for the media content item owned by the copyright owner to provide the copyright owner with the aggregated user data from each license request of the media content item;	<p>“Information collected by Roku is used for the following purposes: ... 2. Improvement of Products and Services: to understand and analyze our user base and how you use the Roku Services, and to improve and enhance the Roku Services, and to develop new products, services, features and functionality; ... 4. Advertising: to show you advertising, including personalized advertising, on the Roku Services, Third-Party Channels, and on third-party websites, mobile apps, platforms and devices, and to measure and understand the reach, viewership, and effectiveness of such advertising; 5. Marketing and Promotions: for marketing purposes, including sending you emails and text messages about products, events, promotions and offers from Roku or its partners or advertisers, and understanding the effectiveness of our marketing; 6. Analytics and Performance: to measure performance and analyze key metrics relevant to our business....”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p>

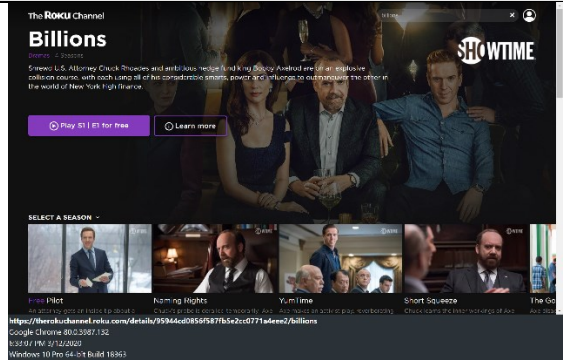
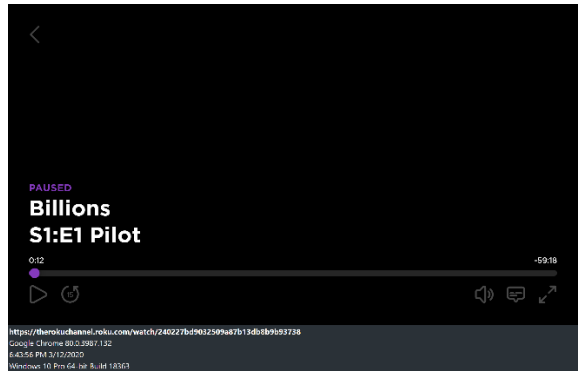
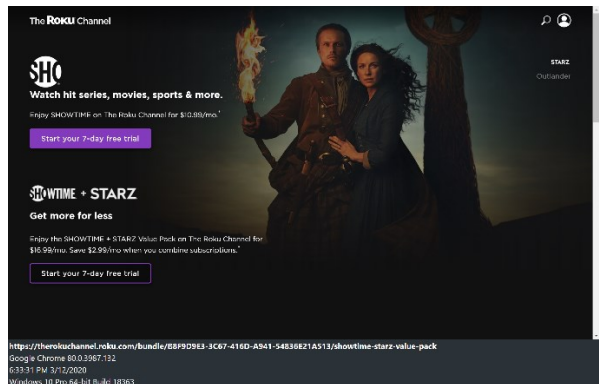
'590 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>“Channels have access to web-based channel analytics through Roku's Developer Dashboard. This allows you to analyze your channel's health, viewership trends, and metrics for specific titles and devices.</p> <p>As a service to our partners, Roku provides some basic analytics for all channels on the platform in the form of standardized dashboards with metrics on channel health, viewership and engagement, and so forth. Dashboards are read-only - meaning users cannot modify the dashboards themselves (apart from applying filters), create new dashboards, or change any of the underlying data. Also, the channel data displayed are restricted to channel owners. You will never see data pertaining to channels other than your own, and Roku will never share your channel data with other channel owners. Roku evaluates making changes to the available dashboards on an ongoing basis, based on feedback from our channel partners. Access to some dashboards may be restricted based on the size of the business relationship.”</p> <p>https://developer.roku.com/docs/features/analytics/analytics-reports.md</p>

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
1[preamble]	A computer implemented method for configuring a multimedia hardware device to enable an authorized stream of a media content item included in a digital media file, <i>comprising</i> :	<p>“A Roku Account give you access to movies, television shows and other audio-visual entertainment in the ‘Roku Channel Store’, a storefront of applications provided by Roku via your device’s on-screen menu, as well as through ‘The Roku Channel’, Roku’s own streaming video service.” https://docs.roku.com/published/usertermsandconditions/en/us</p> <p>“Roku doesn't store most of its content, but streams it directly, eliminating the need for large amounts of internal storage.” https://electronics.howstuffworks.com/gadgets/other-gadgets/roku-streaming-stick1.htm</p> <p>“A Roku TV is a standalone smart TV with built-in TV display and a simple, intuitive interface that lets you stream content over the internet from services such as Netflix, ESPN, and HBO, without needing to connect any additional devices. Roku TV also works like a regular TV, allowing you to connect an HDTV antenna to watch live television, or plug in external devices like a cable set-top box or Blu-ray™ player.” https://support.roku.com/article/209403268</p>
1[a]	receiving a request from a user to stream the content item;	<p>“Roku devices give you access to 500,000+ movies and TV episodes from top free and paid channels, so you can stream almost anything....” https://www.roku.com/en-gb/how-it-works</p>
1[b]	evaluating the request to stream to determine whether the user has acquired a license to stream the media content item and offering the license to stream the media content item to the user when the user does not have the license to stream the media content item;	<p>“Stream top free or paid programming from services like Netflix, Amazon Prime Video, Hulu, Google Play, HBO, SHOWTIME, PBS, and The Roku Channel. Thousands more channels for sports, news, international, and kids programming plus broadcast channels like ABC, NBC, CBS, and FOX. And major music services like Pandora and Sirius XM are available.” https://www.roku.com/en-gb/how-it-works</p>

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		  

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
1[c]	the evaluation of the request to stream, extracting user data that is specific to the user that is attempting to stream the media content item when the user at least one of streams and declines to stream the media content item, wherein the user data includes demographic data associated with the user that enables a third party online retailer that is providing the media content item to be streamed by the user to gauge at least one of a demographic that streamed the media content item of a copyright owner and a demographic that declined to stream the media content item of the copyright owner and the user data includes each media content item that the user streamed and each media content item that the user declined to stream that enables the third party online retailer to target marketing of different media content items to the user based on the demographic of the user and based on a history of media content items that the user has streamed and media content items that the user has declined to stream to determine a trend of interest in media content items by the user and to thereby target the marketing of the different media content items to the user based on the determined trend of interest associated with the user;	<p>“We receive information about your interactions with the Roku Services, such as your ... interactions with content and advertisements.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Viewership Details table The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.</p> <p>The number of streams can be expected to be higher in channels with shorter form content, such as 1-5 minute user-generated videos, than in channels with longer form content, such as feature length films.</p>

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>Streams can generally be expected to exceed visits. If visits exceeds streams, that would indicate account holders are starting your channel, then exiting without ever streaming any content. https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“We receive information about your activities within Roku’s Channels and Roku Direct Publisher Channels ..., like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files your play through the Roku Media Player.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Roku collects information about your online activities, including videos you search for and view, when you use Roku’s mobile app, in order to show you advertisements that we think may interest you on Roku’s and third parties’ online services, and for the other online advertising purposes.” https://docs.roku.com/published/mobileoptout/en/us</p> <p>See Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198.</p> <p>“When you choose to use your voice to control your Player, you agree that Roku and third parties who fulfill your requests and/or provide services for us have your consent to record, process and store your voice inputs (e.g., a recording and the interpretation of what was said), and use such voice inputs with other information about your Player (e.g., device identifier) to provide services to you, to improve the accuracy and quality</p>

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>of the service, and as described in Roku's Privacy Policy.” https://docs.roku.com/published/deviceplayereula/en/us</p> <p><i>see also</i> https://docs.roku.com/published/mobileapptermsofuse/en/us</p>
1[d]	aggregating the user data into a statistics record for the request to stream the media content item when the user streams or declines to stream the media content item, wherein the statistics, record summarizes the user data associated with the request to steam the media content item;	<p>“Viewership Details table The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.</p> <p>The number of streams can be expected to be higher in channels with shorter form content, such as 1-5 minute user-generated videos, than in channels with longer form content, such as feature length films.</p>

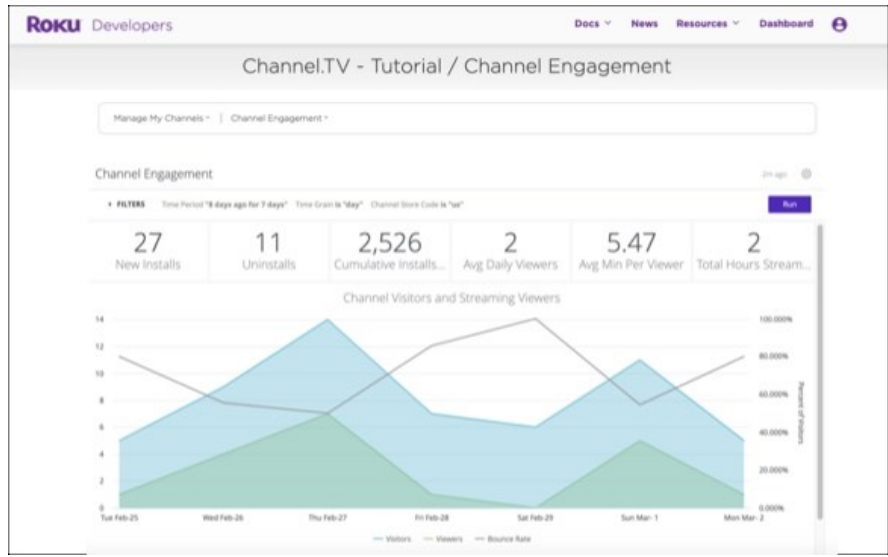
'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>Streams can generally be expected to exceed visits. If visits exceeds streams, that would indicate account holders are starting your channel, then exiting without ever streaming any content.”</p> <p>https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Information collected by Roku is used for the following purposes: ... 2. Improvement of Products and Services: to understand and analyze our user base and how you use the Roku Services, and to improve and enhance the Roku Services, and to develop new products, services, features and functionality; ... 4. Advertising: to show you advertising, including personalized advertising, on the Roku Services, Third-Party Channels, and on third-party websites, mobile apps, platforms and devices, and to measure and understand the reach, viewership, and effectiveness of such advertising; 5. Marketing and Promotions: for marketing purposes, including sending you emails and text messages about products, events, promotions and offers from Roku or its partners or advertisers, and understanding the effectiveness of our marketing; 6. Analytics and Performance: to measure performance and analyze key metrics relevant to our business....”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Advertising Partners - We work with advertising partners to show you advertisements that we think may interest you on Roku Services and on other companies’ websites, apps, and devices. These advertising partners may set and access their own cookies, pixel tags and similar technologies on the Roku Services and they may otherwise collect or have access to information about you which they collect over time and across different online services and devices.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p>
1[e]	storing in a license database the statistics record so that the user data is	“We use industry-standard methods of securing electronic databases of personal information.”

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
	accessible to the third party online retailer that is providing the media content item to be streamed; and	<p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Channel Engagement report The Channel Engagement report is the default that displays when you choose View Analytics. Use this report to grow your audience by analyzing data about streaming activity and the size of your install base. ...</p> <p>Summary statistics The band of metrics below FILTERS shows the summary statistics based on the time period you select in FILTERS:</p> <p>New Installs - total count of new unique accounts during the selected Time Period. Uninstalls - total count of accounts uninstalled during the selected Time Period. Cumulative Installs To-Date - count of unique accounts that that have installed your channel to-date; roughly equivalent to the size of your install base. When users uninstall and re-install a channel, this is credited as one net new installation and will increase the Cumulative Installs To-Date. Average Daily Viewers - average number of daily views similar to DAU "daily active users." Changing Time Grain will not effect this measurement. Average Minutes Per Viewer - average number of minutes streamed per unique streaming accounts. Total Hours Streamed - total hours streamed during the selected Time Period.”</p> <p>https://developer.roku.com/docs/features/analytics/channel-engagement.md</p> <p>“However Roku doesn’t sell most of the ads that run on its platform;</p>

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>most of it is sold by the publishers on the platform, said Roku gm of platform Scott Rosenberg on the earnings call.</p> <p>Enabling publishers to control ad sales on their channels has helped Roku to win favor with media companies, especially as more launch their own OTT apps. In June the company debuted Roku Audience Marketplace, a program for publishers to sell ads in their Roku channels that can be targeted using Roku's first-party data and ad tech. And Roku has played a supporting role by selling ads for smaller publishers' channels and splitting that revenue and striking deals with larger publishers to sell some of their inventory or to fill their unsold inventory.”</p> <p>https://digiday.com/future-of-tv/rokus-advertising-business-outpacing-hardware-business/</p>  <p>https://developer.roku.com/docs/direct-publisher/tutorial/analytics.md</p>
1[f]	analyzing a plurality of statistics records aggregated from each request to stream	<p>“Information collected by Roku is used for the following purposes: ... 2. Improvement of Products and Services: to understand and analyze our</p>

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
	the media content item as provided by the third party online retailer to be streamed to provide the third party online retailer with the aggregated user data from each request to stream the media content item.	<p>user base and how you use the Roku Services, and to improve and enhance the Roku Services, and to develop new products, services, features and functionality; ... 4. Advertising: to show you advertising, including personalized advertising, on the Roku Services, Third-Party Channels, and on third-party websites, mobile apps, platforms and devices, and to measure and understand the reach, viewership, and effectiveness of such advertising; 5. Marketing and Promotions: for marketing purposes, including sending you emails and text messages about products, events, promotions and offers from Roku or its partners or advertisers, and understanding the effectiveness of our marketing; 6. Analytics and Performance: to measure performance and analyze key metrics relevant to our business....”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Advertising Partners - We work with advertising partners to show you advertisements that we think may interest you on Roku Services and on other companies’ websites, apps, and devices. These advertising partners may set and access their own cookies, pixel tags and similar technologies on the Roku Services and they may otherwise collect or have access to information about you which they collect over time and across different online services and devices.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p>

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>Introducing OneView™ Ad Platform, the Ad Platform built for TV streaming.</p> <p>OneView Ad Platform includes:</p> <ul style="list-style-type: none"> ● Cross-device identity – access the largest TV audience dataset powered by deterministic consumer data ● Linear TV insights – plan and measure using unique linear TV data from more than 20 million homes ● Proprietary audiences – activate more than 100 unique segments based on behavioral insights from the number one streaming platform in the US ● Forecast OTT instantly – calculate OTT ad inventory availability in seconds ● In-flight attribution – manage reach, frequency and performance across OTT, desktop, mobile and linear TV ● Guarantee outcomes – guarantee certain demographic delivery or business outcomes like website visits or mobile app downloads <p>https://advertising.roku.com/Advertiser-Solutions</p> <p>“Channels have access to web-based channel analytics through Roku's Developer Dashboard. This allows you to analyze your channel's health, viewership trends, and metrics for specific titles and devices.</p> <p>As a service to our partners, Roku provides some basic analytics for all channels on the platform in the form of standardized dashboards with metrics on channel health, viewership and engagement, and so forth. Dashboards are read-only - meaning users cannot modify the dashboards themselves (apart from applying filters), create new dashboards, or</p>

'560 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>change any of the underlying data. Also, the channel data displayed are restricted to channel owners. You will never see data pertaining to channels other than your own, and Roku will never share your channel data with other channel owners. Roku evaluates making changes to the available dashboards on an ongoing basis, based on feedback from our channel partners. Access to some dashboards may be restricted based on the size of the business relationship.”</p> <p>https://developer.roku.com/docs/features/analytics/analytics-reports.md</p>

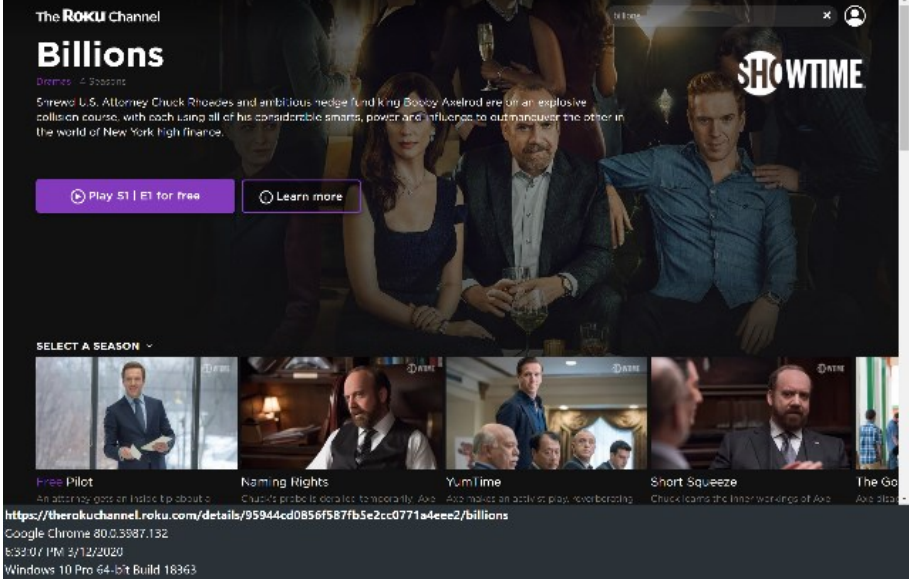
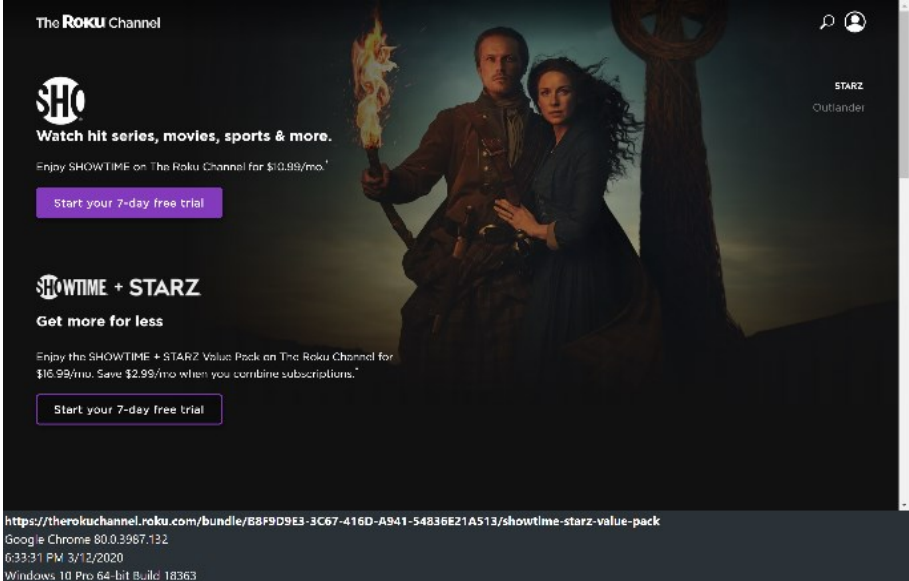
'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
1[preamble]	A computer implemented method for determining a target demographic for media marketing, <i>comprising</i> :	<p>“A Roku Account give you access to movies, television shows and other audio-visual entertainment in the ‘Roku Channel Store’, a storefront of applications provided by Roku via your device’s on-screen menu, as well as through ‘The Roku Channel’, Roku’s own streaming video service.” https://docs.roku.com/published/usertermsandconditions/en/us</p> <p>“Roku doesn't store most of its content, but streams it directly, eliminating the need for large amounts of internal storage.” https://electronics.howstuffworks.com/gadgets/other-gadgets/roku-streaming-stick1.htm</p> <p>“A Roku TV is a standalone smart TV with built-in TV display and a simple, intuitive interface that lets you stream content over the internet from services such as Netflix, ESPN, and HBO, without needing to connect any additional devices. Roku TV also works like a regular TV, allowing you to connect an HDTV antenna to watch live television, or plug in external devices like a cable set-top box or Blu-ray™ player.” https://support.roku.com/article/209403268</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more</p>

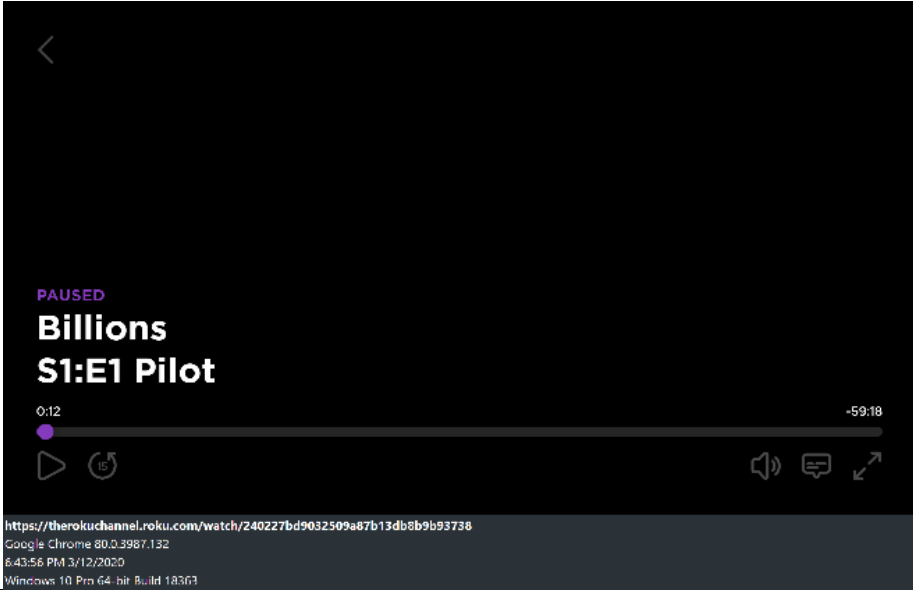
'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.”</p> <p>https://developer.roku.com/docs/features/analytics/audience-insights.md</p>
1[a]	receiving a first request from first user and a second request from a second user to reproduce the media content item;	<p>“Roku devices give you access to 500,000+ movies and TV episodes from top free and paid channels, so you can stream almost anything....”</p> <p>https://www.roku.com/en-gb/how-it-works</p>
1[b]	evaluating each of the first and second request to determine whether each of the first and second users has previously acquired a license to reproduce the media content item and offering the license to reproduce the media content item to each user when the each user does not have the license to reproduce the media content item;	<p>“Stream top free or paid programming from services like Netflix, Amazon Prime Video, Hulu, Google Play, HBO, SHOWTIME, PBS, and The Roku Channel. Thousands more channels for sports, news, international, and kids programming plus broadcast channels like ABC, NBC, CBS, and FOX. And major music services like Pandora and Sirius XM are available.”</p> <p>https://www.roku.com/en-gb/how-it-works</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		 <p>The Roku Channel</p> <h2>Billions</h2> <p>Shewell U.S. Attorney Chuck Rhoades and ambitious hedge fund king Bobby Axelrod are on an explosive collision course, with each using all of his considerable smarts, power and influence to outmaneuver the other in the world of New York high finance.</p> <p>Play S1 E1 for free Learn more</p> <p>SELECT A SEASON</p> <p>Free Pilot Naming Rights Yum!line Short Squeeze The Go</p> <p>https://therokuchannel.roku.com/details/95944cd0856f587fb5e2cc0771a4ee2/billions Google Chrome 80.0.3987.132 6:33:10 PM 3/12/2020 Windows 10 Pro 64-bit Build 18363</p>
		 <p>The Roku Channel</p> <h2>SHOWTIME</h2> <p>Watch hit series, movies, sports & more.</p> <p>Enjoy SHOWTIME on The Roku Channel for \$10.99/mo.*</p> <p>Start your 7-day free trial</p> <h2>SHOWTIME + STARZ</h2> <p>Get more for less</p> <p>Enjoy the SHOWTIME + STARZ Value Pack on The Roku Channel for \$16.99/mo. Save \$2.99/mo when you combine subscriptions.*</p> <p>Start your 7-day free trial</p> <p>https://therokuchannel.roku.com/bundle/B8F9D9E3-3C67-416D-A941-54836E21A513/showtime-starz-value-pack Google Chrome 80.0.3987.132 6:33:31 PM 3/12/2020 Windows 10 Pro 64-bit Build 18363</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		 <p>https://therokuchannel.roku.com/watch/240227bd9032509a87b13db8b9b93738 Google Chrome 80.0.3987.132 6:43:56 PM 3/12/2020 Windows 10 Pro 64-bit Build 18363</p>
1[c]	after the evaluation of the first request, extracting first user data specific to first user when the first user accepts the offer and acquires the license;	<p>“We receive information about your interactions with the Roku Services, such as your ... interactions with content and advertisements.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“We receive information about your activities within Roku’s Channels and Roku Direct Publisher Channels ..., like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files your play through the Roku Media Player.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Roku collects information about your online activities, including videos you search for and view, when you use Roku’s mobile app, in order to show</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>you advertisements that we think may interest you on Roku's and third parties' online services, and for the other online advertising purposes.” https://docs.roku.com/published/mobileoptout/en/us</p> <p><i>See</i> Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198.</p> <p>“When you choose to use your voice to control your Player, you agree that Roku and third parties who fulfill your requests and/or provide services for us have your consent to record, process and store your voice inputs (e.g., a recording and the interpretation of what was said), and use such voice inputs with other information about your Player (e.g., device identifier) to provide services to you, to improve the accuracy and quality of the service, and as described in Roku's Privacy Policy.” https://docs.roku.com/published/deviceplayereula/en/us</p> <p><i>See also</i> https://docs.roku.com/published/mobileapptermsfuse/en/us</p> <p>“When you access Roku's Channels and Roku Direct Publisher Channels, we receive information about your activities like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files you play through the Roku Media Player.” https://docs.roku.com/published/userprivacypolicy/en/us#userprivacypolicy-en_us-CCPA</p> <p>“When you do not uncheck “Use this Info to enhance TV viewing” during device set up, or when you select “Use info from TV inputs” from the Settings menu, Roku will, through ACR technology, collect information</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>about what you watch and when you watch (e.g., the programs, commercials and channels you viewed, and the date, time and duration of the viewing) via your Roku TV's antenna, and devices connected to your Roku TV, including cable and satellite set top boxes. Roku will collect this information when you access live TV from any streaming channel. The Roku TV also sends back to Roku the data received through the TV antenna and the data about how you use the on-screen TV guide. When this setting is enabled, Roku may share your viewing data with third parties for measurement purposes -- for example, to help them understand the audience viewing the ads or programs, or to measure the effectiveness of the ads. Roku may also share data derived from this viewing data (for example., audience segments like sports fans, sitcom lovers, cord cutters, etc.) with its partners to make advertising more relevant to you.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p>
1[d]	after the evaluation of the second request, extracting second user data specific to the second user when the second user declines the offer to acquire the license;	<p>See Evidence of Infringement for Claim Element 1[c].</p> <p>“Viewership Details table The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.</p> <p>The number of streams can be expected to be higher in channels with shorter form content, such as 1-5 minute user-generated videos, than in channels with longer form content, such as feature length films.</p> <p>Streams can generally be expected to exceed visits. If visits exceeds streams, that would indicate account holders are starting your channel, then exiting without ever streaming any content. https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Your selection will not affect data collected when you access or stream content over the Internet. For example, Roku will still collect and may share other information about your use of streaming channels on your Roku TV (i.e., channels that you have downloaded through Roku’s streaming service or channels that Roku pre-installed on your Roku TV to stream content over the Internet). Disabling this feature will not affect your receipt of personalized ads, or ad and program measurement on Roku TVs or elsewhere. Visit Limit Ad Tracking in your Roku TV’s settings menu to learn about options regarding sharing of streaming channel viewing data and personalized ads on this Roku TV. To learn more about Roku’s practices, see the Roku Privacy Policy. Also, operators of the streaming channels that you install on your Roku TV may collect information about your use of their channels. See their respective privacy policies to learn more.” https://docs.roku.com/published/acrservicepolicy/en/us</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>“Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.” https://developer.roku.com/docs/features/analytics/viewership-summary.md</p> <p><i>See also</i> Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198 (discussing tracking of triggering of video playback for Roku).</p>
1[e]	aggregating the extracted first and second user data into a statistics record, wherein the statistics record summarizes the first user data and second user data;	<p>“Viewership Details table The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Viewership Details on Viewership Summary</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>Screenshots have been included for illustrative purposes only, and some values have been intentionally blurred out to avoid any misinterpretations.” https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md</p> <p>“Information collected by Roku is used for the following purposes: ... 2. Improvement of Products and Services: to understand and analyze our user</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>base and how you use the Roku Services, and to improve and enhance the Roku Services, and to develop new products, services, features and functionality; ... 4. Advertising: to show you advertising, including personalized advertising, on the Roku Services, Third-Party Channels, and on third-party websites, mobile apps, platforms and devices, and to measure and understand the reach, viewership, and effectiveness of such advertising; 5. Marketing and Promotions: for marketing purposes, including sending you emails and text messages about products, events, promotions and offers from Roku or its partners or advertisers, and understanding the effectiveness of our marketing; 6. Analytics and Performance: to measure performance and analyze key metrics relevant to our business....”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Advertising Partners - We work with advertising partners to show you advertisements that we think may interest you on Roku Services and on other companies’ websites, apps, and devices. These advertising partners may set and access their own cookies, pixel tags and similar technologies on the Roku Services and they may otherwise collect or have access to information about you which they collect over time and across different online services and devices.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p>
1[f]	storing in a license database the statistics record so that the summarized first and second user data is accessible to a third party;	<p>“We use industry-standard methods of securing electronic databases of personal information.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Channel Engagement report</p> <p>The Channel Engagement report is the default that displays when you choose View Analytics. Use this report to grow your audience by analyzing data about streaming activity and the size of your install base.</p> <p>...</p>

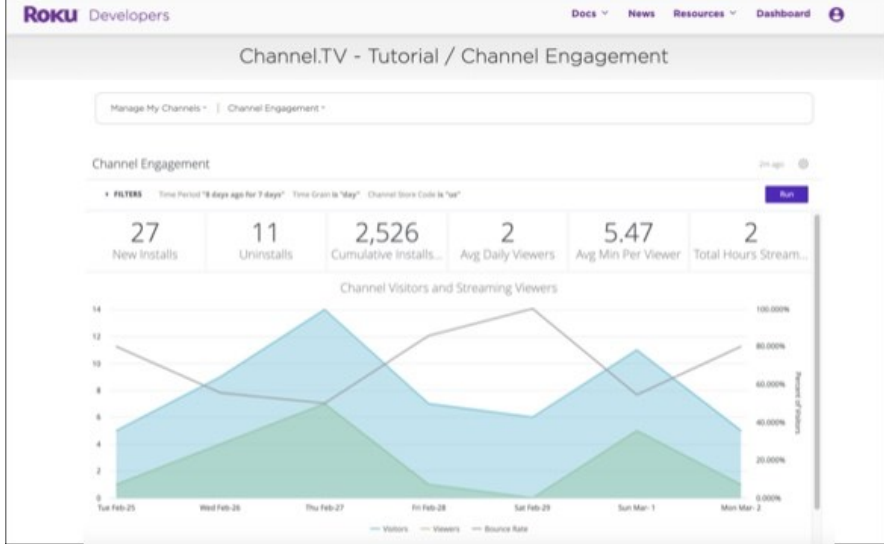
'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>Summary statistics The band of metrics below FILTERS shows the summary statistics based on the time period you select in FILTERS:</p> <p>New Installs - total count of new unique accounts during the selected Time Period. Uninstalls - total count of accounts uninstalled during the selected Time Period. Cumulative Installs To-Date - count of unique accounts that that have installed your channel to-date; roughly equivalent to the size of your install base. When users uninstall and re-install a channel, this is credited as one net new installation and will increase the Cumulative Installs To-Date. Average Daily Viewers - average number of daily views similar to DAU "daily active users." Changing Time Grain will not effect this measurement. Average Minutes Per Viewer - average number of minutes streamed per unique streaming accounts. Total Hours Streamed - total hours streamed during the selected Time Period.” https://developer.roku.com/docs/features/analytics/channel-engagement.md</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md</p> <p>“However Roku doesn’t sell most of the ads that run on its platform; most of it is sold by the publishers on the platform, said Roku gm of platform Scott Rosenberg on the earnings call.</p> <p>Enabling publishers to control ad sales on their channels has helped Roku to win favor with media companies, especially as more launch their own OTT apps. In June the company debuted Roku Audience Marketplace, a program for publishers to sell ads in their Roku channels that can be targeted using Roku’s first-party data and ad tech. And Roku has played a supporting role by selling ads for smaller publishers’ channels and splitting that revenue and striking deals with larger publishers to sell some of their inventory or to fill their unsold inventory.” https://digiday.com/future-of-tv/rokus-advertising-business-outpacing-hardware-business/</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		 <p>https://developer.roku.com/docs/direct-publisher/tutorial/analytics.md</p>
1[g]	analyzing by the third party, the statistics record, to determine the target demographic based on a first demographic corresponding to the first user data and a second demographic corresponding to the second user data; and	<p>“Information collected by Roku is used for the following purposes: ... 2. Improvement of Products and Services: to understand and analyze our user base and how you use the Roku Services, and to improve and enhance the Roku Services, and to develop new products, services, features and functionality; ... 4. Advertising: to show you advertising, including personalized advertising, on the Roku Services, Third-Party Channels, and on third-party websites, mobile apps, platforms and devices, and to measure and understand the reach, viewership, and effectiveness of such advertising; 5. Marketing and Promotions: for marketing purposes, including sending you emails and text messages about products, events, promotions and offers from Roku or its partners or advertisers, and understanding the effectiveness of our marketing; 6. Analytics and Performance: to measure performance and analyze key metrics relevant to our business....”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Advertising Partners - We work with advertising partners to show you</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>advertisements that we think may interest you on Roku Services and on other companies' websites, apps, and devices. These advertising partners may set and access their own cookies, pixel tags and similar technologies on the Roku Services and they may otherwise collect or have access to information about you which they collect over time and across different online services and devices.”</p> <p>http://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Channels have access to web-based channel analytics through Roku's Developer Dashboard. This allows you to analyze your channel's health, viewership trends, and metrics for specific titles and devices.</p> <p>As a service to our partners, Roku provides some basic analytics for all channels on the platform in the form of standardized dashboards with metrics on channel health, viewership and engagement, and so forth. Dashboards are read-only - meaning users cannot modify the dashboards themselves (apart from applying filters), create new dashboards, or change any of the underlying data. Also, the channel data displayed are restricted to channel owners. You will never see data pertaining to channels other than your own, and Roku will never share your channel data with other channel owners. Roku evaluates making changes to the available dashboards on an ongoing basis, based on feedback from our channel partners. Access to some dashboards may be restricted based on the size of the business relationship.”</p> <p>https://developer.roku.com/docs/features/analytics/analytics-reports.md</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning.</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md</p>
1[h]	marketing, by the third party, the media content item to a plurality of other users corresponding to the determined target demographic	<p>“Introducing OneView™ Ad Platform, the Ad Platform built for TV streaming.</p> <p>OneView Ad Platform includes:</p> <ul style="list-style-type: none"> • Cross-device identity – access the largest TV audience dataset powered by deterministic consumer data • Linear TV insights – plan and measure using unique linear TV data from more than 20 million homes • Proprietary audiences – activate more than 100 unique segments based on behavioral insights from the number one streaming platform in the US • Forecast OTT instantly – calculate OTT ad inventory availability in seconds • In-flight attribution – manage reach, frequency and performance

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>across OTT, desktop, mobile and linear TV</p> <ul style="list-style-type: none"> • Guarantee outcomes – guarantee certain demographic delivery or business outcomes like website visits or mobile app downloads” <p>https://advertising.roku.com/Advertiser-Solutions</p> <p><i>See also, OneView Product Guide.</i></p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.”</p> <p>https://developer.roku.com/docs/features/analytics/audience-insights.md</p>

'191 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>Introducing OneView™ Ad Platform, the Ad Platform built for TV streaming.</p> <p>OneView Ad Platform includes:</p> <ul style="list-style-type: none"> ● Cross-device identity – access the largest TV audience dataset powered by deterministic consumer data ● Linear TV insights – plan and measure using unique linear TV data from more than 20 million homes ● Proprietary audiences – activate more than 100 unique segments based on behavioral insights from the number one streaming platform in the US ● Forecast OTT instantly – calculate OTT ad inventory availability in seconds ● In-flight attribution – manage reach, frequency and performance across OTT, desktop, mobile and linear TV ● Guarantee outcomes – guarantee certain demographic delivery or business outcomes like website visits or mobile app downloads <p>https://advertising.roku.com/Advertiser-Solutions</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
1[preamble]	A computer implemented method for configuring a multimedia hardware device to stream a media content item, <i>comprising</i> :	<p>“A Roku Account give you access to movies, television shows and other audio-visual entertainment in the ‘Roku Channel Store’, a storefront of applications provided by Roku via your device’s on-screen menu, as well as through ‘The Roku Channel’, Roku’s own streaming video service.” https://docs.roku.com/published/usertermsandconditions/en/us</p> <p>“Roku doesn't store most of its content, but streams it directly, eliminating the need for large amounts of internal storage.” https://electronics.howstuffworks.com/gadgets/other-gadgets/roku-streaming-stick1.htm</p> <p>“A Roku TV is a standalone smart TV with built-in TV display and a simple, intuitive interface that lets you stream content over the internet from services such as Netflix, ESPN, and HBO, without needing to connect any additional devices. Roku TV also works like a regular TV, allowing you to connect an HDTV antenna to watch live television, or plug in external devices like a cable set-top box or Blu-ray™ player.” https://support.roku.com/article/209403268</p>
1[a]	receiving a first request from a first user to evaluate streaming the media content item and a second request from a second user to evaluate streaming the media content item;	<p>“Roku devices give you access to 500,000+ movies and TV episodes from top free and paid channels, so you can stream almost anything....” https://www.roku.com/en-gb/how-it-works</p>
1[b]	identifying the media content item by determining a media fingerprint that identifies a unique characteristic inherently present in the media content item captured during recorded creation of the media content item,	<p>“When you use a Roku TV with the Smart TV experience enabled, we use Automatic Content Recognition (“ACR”) technology to receive information about what live television content you watch via the Roku TV’s antenna, and what you watch via devices connected to your Roku TV, including cable and satellite set top boxes. For example, we receive TV viewing information such as the programs, commercials, and channels you view, the</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
	and excluding information introduced to the media content item extraneous to the record creation;	<p>date, time and duration of the viewing, and how you use the on-screen TV guide. We receive TV viewing information both when you access live TV directly through your Smart TV's interface and when you access live TV from within a Third-Party Channel. If the Smart TV experience is enabled on your Roku TV, we will use this information to personalize your TV viewing experience and ads.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Model #3 This model utilizes Roku's Event Dispatcher library that allows channels to share in-app user behaviors and events with Roku by inserting custom tracking pixels into the channel. The Event Dispatcher enables Roku to customize the Universal Search results based on a user's ability to view a particular piece of content without making a transaction. In other words, content in a channel that the user already subscribes to will appear higher in the search results than content behind an additional paywall or content with ads. The Roku Event Dispatcher is the vehicle used to allow Roku to determine a user's authenticated status.” https://developer.roku.com/docs/developer-program/libraries/roku-analytics-component.md</p> <p>“Like all televisions, the Roku TV's antenna receives over-the-air signals from television broadcast stations, and these signals contain programming information. The Roku TV is also equipped with Automatic Content Recognition (ACR) technology that, when enabled, allows Roku to recognize the programs and commercials being viewed through the Roku TV's antenna, and devices connected to your Roku TV, including cable and satellite set top boxes.” https://docs.roku.com/published/acrservicepolicy/en/us</p> <p><i>See</i> Geoffrey A. Fowler, <i>You watch TV. Your TV watches back</i>, Wash. Post, Sept. 18, 2019,</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>https://www.washingtonpost.com/technology/2019/09/18/you-watch-tv-your-tv-watches-back.</p> <p>See also https://www.whattowatch.com/news/roku-privacy-policy-and-ad-tracking-what-you-need-know</p>
1[c]	extracting first user data specific to the first user when the first user accepts to stream the media content item;	<p>“We receive information about your interactions with the Roku Services, such as your ... interactions with content and advertisements.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“We receive information about your activities within Roku’s Channels and Roku Direct Publisher Channels ..., like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files your play through the Roku Media Player.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Roku collects information about your online activities, including videos you search for and view, when you use Roku’s mobile app, in order to show you advertisements that we think may interest you on Roku’s and third parties’ online services, and for the other online advertising purposes.” https://docs.roku.com/published/mobileoptout/en/us</p> <p>See Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198.</p> <p>“When you choose to use your voice to control your Player, you agree that Roku and third parties who fulfill your requests and/or provide services for us have your consent to record, process and store your voice inputs (e.g., a recording and the interpretation of what was said), and use such voice inputs</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>with other information about your Player (e.g., device identifier) to provide services to you, to improve the accuracy and quality of the service, and as described in Roku's Privacy Policy.” https://docs.roku.com/published/deviceplayereula/en/us</p> <p>See also https://docs.roku.com/published/mobileapptermsofuse/en/us</p> <p>“When you access Roku's Channels and Roku Direct Publisher Channels, we receive information about your activities like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files you play through the Roku Media Player.” https://docs.roku.com/published/userprivacypolicy/en/us#userprivacypolicy-en_us-CCPA</p> <p>“When you do not uncheck “Use this Info to enhance TV viewing” during device set up, or when you select “Use info from TV inputs” from the Settings menu, Roku will, through ACR technology, collect information about what you watch and when you watch (e.g., the programs, commercials and channels you viewed, and the date, time and duration of the viewing) via your Roku TV's antenna, and devices connected to your Roku TV, including cable and satellite set top boxes. Roku will collect this information when you access live TV from any streaming channel. The Roku TV also sends back to Roku the data received through the TV antenna and the data about how you use the on-screen TV guide. When this setting is enabled, Roku may share your viewing data with third parties for measurement purposes -- for example, to help them understand the audience viewing the ads or programs, or to measure the effectiveness of the ads. Roku may also share data derived from this viewing data (for example., audience segments like sports fans, sitcom lovers, cord cutters, etc.) with its</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>partners to make advertising more relevant to you.” https://docs.roku.com/published/acrservicepolicy/en/us</p> <p>“C. Information We Receive from Third Parties</p> <p>We may receive data about you from other sources like data providers and combine it with the data that we collect from you or your use of the Roku Services. Advertisers that show ads through Roku’s advertising services (our “Advertisers”) may also provide data about individuals to us to personalize and measure ads through Roku’s advertising services.</p> <p>We may also receive your personal information from others if they have referred you as described under Part I, Section A(5) above.” https://docs.roku.com/published/userprivacypolicy/en/us</p>
1[d]	extracting second user data specific to the second user when the second user declines to stream the media content item;	<p>“Viewership Details table The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.</p> <p>The number of streams can be expected to be higher in channels with shorter form content, such as 1-5 minute user-generated videos, than in channels with longer form content, such as feature length films.</p> <p>Streams can generally be expected to exceed visits. If visits exceeds streams, that would indicate account holders are starting your channel, then exiting without ever streaming any content.</p> <p>https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Your selection will not affect data collected when you access or stream content over the Internet. For example, Roku will still collect and may share other information about your use of streaming channels on your Roku TV (i.e., channels that you have downloaded through Roku’s streaming service or channels that Roku pre-installed on your Roku TV to stream content over the Internet). Disabling this feature will not affect your receipt of personalized ads, or ad and program measurement on Roku TVs or elsewhere. Visit Limit Ad Tracking in your Roku TV’s settings menu to learn about options regarding sharing of streaming channel viewing data and personalized ads on this Roku TV. To learn more about Roku’s practices, see the Roku Privacy Policy. Also, operators of the streaming channels that you install on your Roku TV may collect information about your use of their channels. See their respective privacy policies to learn more.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p> <p>“Visits and Streams visualization</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.”</p> <p>https://developer.roku.com/docs/features/analytics/viewership-summary.md</p> <p><i>See also</i> Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198 (discussing tracking of triggering of video playback for Roku).</p>
1[e]	aggregating the extracted first user data into a first statistics record and the extracted second user data into a second statistics record, wherein the first statistics record summarizes the first user data and the second statistics record summarizes the second user data;	<p>“Viewership Details table</p> <p>The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Viewership Details on Viewership Summary</p> <p>Screenshots have been included for illustrative purposes only, and some values have been intentionally blurred out to avoid any misinterpretations.”</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md</p> <p>“[W]e receive TV viewing information such as the programs, commercials, and channels you view, the date, time and duration of the viewing, and how you use the on-screen TV guide. We receive TV viewing information both when you access live TV directly through your Smart TV’s interface and</p>

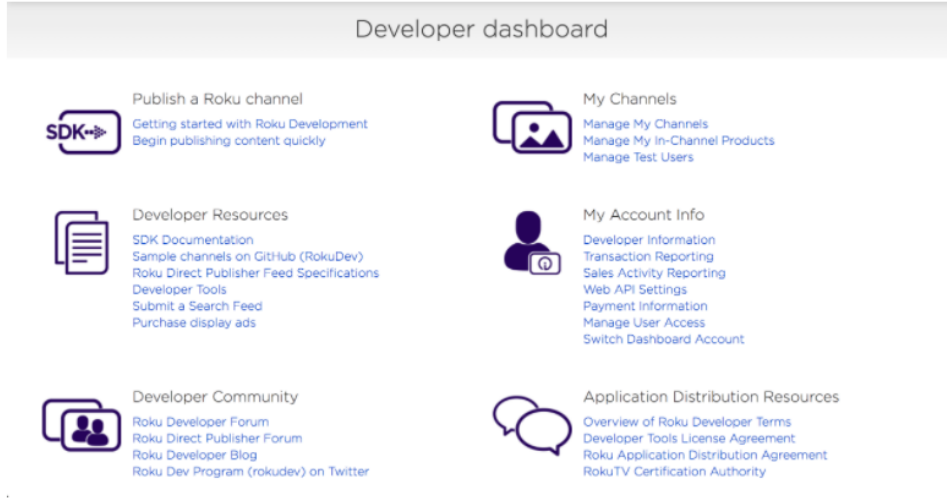
'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>when you access live TV from within a Third-Party Channel. If the Smart TV experience is enabled on your Roku TV, we will use this information to personalize your TV viewing experience and ads.”</p> <p>https://docs.roku.com/published/userprivacypolicy/en/us</p>
1[f]	storing in a database the first statistics record and the second statistics record so that the summarized first user data and second user data is accessible to a third party online retailer;	<p>“Channel Engagement report</p> <p>The Channel Engagement report is the default that displays when you choose View Analytics. Use this report to grow your audience by analyzing data about streaming activity and the size of your install base.</p> <p>...</p> <p>Summary statistics</p> <p>The band of metrics below FILTERS shows the summary statistics based on the time period you select in FILTERS:</p> <p>New Installs - total count of new unique accounts during the selected Time Period.</p> <p>Uninstalls - total count of accounts uninstalled during the selected Time Period.</p> <p>Cumulative Installs To-Date - count of unique accounts that that have installed your channel to-date; roughly equivalent to the size of your install base. When users uninstall and re-install a channel, this is credited as one net new installation and will increase the Cumulative Installs To-Date.</p> <p>Average Daily Viewers - average number of daily views similar to DAU "daily active users." Changing Time Grain will not effect this measurement.</p> <p>Average Minutes Per Viewer - average number of minutes streamed per unique streaming accounts.</p> <p>Total Hours Streamed - total hours streamed during the selected Time Period.”</p> <p>https://developer.roku.com/docs/features/analytics/channel-engagement.md</p> <p>“However Roku doesn’t sell most of the ads that run on its platform; most of it is sold by the publishers on the platform, said Roku gm of platform</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>Scott Rosenberg on the earnings call.</p> <p>Enabling publishers to control ad sales on their channels has helped Roku to win favor with media companies, especially as more launch their own OTT apps. In June the company debuted Roku Audience Marketplace, a program for publishers to sell ads in their Roku channels that can be targeted using Roku's first-party data and ad tech. And Roku has played a supporting role by selling ads for smaller publishers' channels and splitting that revenue and striking deals with larger publishers to sell some of their inventory or to fill their unsold inventory.”</p> <p>https://digiday.com/future-of-tv/rokus-advertising-business-outpacing-hardware-business/</p> <p>“When you do not uncheck “Use this Info to enhance TV viewing” during device set up, or when you select “Use info from TV inputs” from the Settings menu, Roku will, through ACR technology, collect information about what you watch and when you watch (e.g., the programs, commercials and channels you viewed, and the date, time and duration of the viewing) via your Roku TV's antenna, and devices connected to your Roku TV, including cable and satellite set top boxes. Roku will collect this information when you access live TV from any streaming channel. The Roku TV also sends back to Roku the data received through the TV antenna and the data about how you use the on-screen TV guide. When this setting is enabled, Roku may share your viewing data with third parties for measurement purposes -- for example, to help them understand the audience viewing the ads or programs, or to measure the effectiveness of the ads. Roku may also share data derived from this viewing data (for example., audience segments like sports fans, sitcom lovers, cord cutters, etc.) with its partners to make advertising more relevant to you.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p>
1[g]	retrieving the first statistics record and the second statistics record with	

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
	the identity of the media content item determined by the media fingerprint;	<p>Developer Dashboard</p> <p><i>Managing channels, products, test users, and analytics</i></p>  <p>The Developer Dashboard contains many useful features such as submitting and updating channels, managing test users, and an assortment of channel engagement or Roku Pay transactions reports.</p> <p>https://developer.roku.com/docs/features/dashboard/overview.md</p> <p>“When you use a Roku TV with the Smart TV experience enabled, we use Automatic Content Recognition (“ACR”) technology to receive information about what live television content you watch via the Roku TV’s antenna, and what you watch via devices connected to your Roku TV, including cable and satellite set top boxes. For example, we receive TV viewing information such as the programs, commercials, and channels you view, the date, time and duration of the viewing, and how you use the on-screen TV guide. We receive TV viewing information both when you access live TV directly through your Smart TV’s interface and when you access live TV</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>from within a Third-Party Channel. If the Smart TV experience is enabled on your Roku TV, we will use this information to personalize your TV viewing experience and ads.” https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Model #3 This model utilizes Roku's Event Dispatcher library that allows channels to share in-app user behaviors and events with Roku by inserting custom tracking pixels into the channel. The Event Dispatcher enables Roku to customize the Universal Search results based on a user's ability to view a particular piece of content without making a transaction. In other words, content in a channel that the user already subscribes to will appear higher in the search results than content behind an additional paywall or content with ads. The Roku Event Dispatcher is the vehicle used to allow Roku to determine a user's authenticated status.” https://developer.roku.com/docs/developer-program/libraries/roku-analytics-component.md</p> <p>“Like all televisions, the Roku TV’s antenna receives over-the-air signals from television broadcast stations, and these signals contain programming information. The Roku TV is also equipped with Automatic Content Recognition (ACR) technology that, when enabled, allows Roku to recognize the programs and commercials being viewed through the Roku TV’s antenna, and devices connected to your Roku TV, including cable and satellite set top boxes.” https://docs.roku.com/published/acrservicepolicy/en/us</p>
1[h]	analyzing the retrieved first statistics record and the retrieved second statistics record to determine a target demographic of the media content item based on a first demographic corresponding to the first user data	<p>“Nick Feamster: It’s a variety of things. I think one of the things that we found surprising was that some of the channels that we looked at, we found them sending quite detailed information, including the video title. So exactly the title of the show or the video that you were watching. Of the 2,000 channels that we looked at on Roku and Amazon, many of them sent back unique identifiers, something called an ad ID. And many of them also</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
	that accepted to stream the media content item and a second demographic corresponding to the second user data that declined to stream the media content item; and	<p>sent back other more detailed information, including the serial number of the device, as well as, your city, state, and zip code in some cases.” https://www.sciencefriday.com/segments/smart-tv-roku-spying/</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md</p>
1[i]	providing the third party online retailer the target demographic to market the media content item to a plurality of other users corresponding	<p>“Introducing OneView™ Ad Platform, the Ad Platform built for TV streaming.</p> <p>OneView Ad Platform includes:</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
	to the target demographic of the media content item.	<ul style="list-style-type: none"> • Cross-device identity – access the largest TV audience dataset powered by deterministic consumer data • Linear TV insights – plan and measure using unique linear TV data from more than 20 million homes • Proprietary audiences – activate more than 100 unique segments based on behavioral insights from the number one streaming platform in the US • Forecast OTT instantly – calculate OTT ad inventory availability in seconds • In-flight attribution – manage reach, frequency and performance across OTT, desktop, mobile and linear TV • Guarantee outcomes – guarantee certain demographic delivery or business outcomes like website visits or mobile app downloads” <p>https://advertising.roku.com/Advertiser-Solutions</p> <p><i>See also, OneView Product Guide.</i></p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young</p>

'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md</p> <p>Introducing OneView™ Ad Platform, the Ad Platform built for TV streaming.</p> <p>OneView Ad Platform includes:</p> <ul style="list-style-type: none"> ● Cross-device identity – access the largest TV audience dataset powered by deterministic consumer data ● Linear TV insights – plan and measure using unique linear TV data from more than 20 million homes ● Proprietary audiences – activate more than 100 unique segments based on behavioral insights from the number one streaming platform in the US ● Forecast OTT instantly – calculate OTT ad inventory availability in seconds ● In-flight attribution – manage reach, frequency and performance across OTT, desktop, mobile and linear TV ● Guarantee outcomes – guarantee certain demographic delivery or business outcomes like website visits or mobile app downloads


'691 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>https://advertising.roku.com/Advertiser-Solutions</p> <p>“Channels have access to web-based channel analytics through Roku's Developer Dashboard. This allows you to analyze your channel's health, viewership trends, and metrics for specific titles and devices.</p> <p>As a service to our partners, Roku provides some basic analytics for all channels on the platform in the form of standardized dashboards with metrics on channel health, viewership and engagement, and so forth. Dashboards are read-only - meaning users cannot modify the dashboards themselves (apart from applying filters), create new dashboards, or change any of the underlying data. Also, the channel data displayed are restricted to channel owners. You will never see data pertaining to channels other than your own, and Roku will never share your channel data with other channel owners. Roku evaluates making changes to the available dashboards on an ongoing basis, based on feedback from our channel partners. Access to some dashboards may be restricted based on the size of the business relationship.”</p> <p>https://developer.roku.com/docs/features/analytics/analytics-reports.md</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
1[preamble]	A multimedia hardware device <i>comprising</i> :	<p>“A Roku TV is a standalone smart TV with built-in TV display and a simple, intuitive interface that lets you stream content over the internet from services such as Netflix, ESPN, and HBO, without needing to connect any additional devices. Roku TV also works like a regular TV, allowing you to connect an HDTV antenna to watch live television, or plug in external devices like a cable set-top box or Blu-ray™ player.” https://support.roku.com/article/209403268</p> <p>See https://www.roku.com/products/roku-tv (showing Roku TV products)</p> <p>See https://www.roku.com/products/players (showing Roku Streaming Player products)</p>
1[a]	a processor; and	<div> </div> <p style="text-align: center;">Power & performance</p> <p>Roku Ultra is our fastest and most powerful player ever. Loaded with a new and improved quad-core processor, you'll enjoy channels that launch in a snap and a responsive interface. It's great for cutting cable and people who love to stream.</p> <p>https://www.roku.com/products/roku-ultra</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		 <p>Roku Ultra LT Streams HD 4K HDR ★★★★★ 4.6 56 ></p> <ul style="list-style-type: none"> ✓ Powerful quad-core processor ✓ Smooth wired and wireless streaming ✓ Includes headphones for private listening on remote ✓ Share videos, photos, and music from your Apple device using AirPlay. ✓ Stream free TV, live news, sports, music, movies, and more ✓ Voice remote with TV controls and private listening <p>\$59.00</p> <p>https://www.roku.com/products/roku-ultra-lt</p> <p>See https://developer.roku.com/docs/specs/hardware.md (providing specifications of current, updatable, and legacy model Roku TV and Roku Streaming Player products)</p>
1[b]	a memory coupled with the processor, the memory including instructions that, when executed by the processor cause the processor to:	See https://developer.roku.com/docs/specs/hardware.md (providing specifications of current, updatable, and legacy model Roku TV and Roku Streaming Player products).
1[b-1]	generate a first request from a user to evaluate streaming a first media content item to the device;	<p>“Roku devices give you access to 500,000+ movies and TV episodes from top free and paid channels, so you can stream almost anything....” https://www.roku.com/en-ot/how-it-works</p> <p>“Summary statistics The band of metrics below FILTERS shows the summary statistics based on the time period you select in FILTERS:</p> <p>New Installs - total count of new unique accounts during the selected Time Period.</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>Uninstalls - total count of accounts uninstalled during the selected Time Period.</p> <p>Cumulative Installs To-Date - count of unique accounts that that have installed your channel to-date; roughly equivalent to the size of your install base. When users uninstall and re-install a channel, this is credited as one net new installation and will increase the Cumulative Installs To-Date.</p> <p>Average Daily Viewers - average number of daily views similar to DAU "daily active users." Changing Time Grain will not effect this measurement.</p> <p>Average Minutes Per Viewer - average number of minutes streamed per unique streaming accounts.</p> <p>Total Hours Streamed - total hours streamed during the selected Time Period.”</p> <p>https://developer.roku.com/docs/features/analytics/channel-engagement.md</p>
1[b-2]	identify the first media content item by determining a first media fingerprint that identifies a first unique characteristic inherently present in the first media content item captured during the recorded creation of the first media content item, and excluding information introduced to the first media content item extraneous to the record creation;	<p>“When you use a Roku TV with the Smart TV experience enabled, we use Automatic Content Recognition (“ACR”) technology to receive information about what live television content you watch via the Roku TV’s antenna, and what you watch via devices connected to your Roku TV, including cable and satellite set top boxes. For example, we receive TV viewing information such as the programs, commercials, and channels you view, the date, time and duration of the viewing, and how you use the on-screen TV guide. We receive TV viewing information both when you access live TV directly through your Smart TV’s interface and when you access live TV from within a Third-Party Channel. If the Smart TV experience is enabled on your Roku TV, we will use this information to personalize your TV viewing experience and ads.”</p> <p>https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Model #3</p> <p>This model utilizes Roku's Event Dispatcher library that allows channels to share in-app user behaviors and events with Roku by inserting custom tracking pixels into the channel. The Event Dispatcher enables Roku to customize the Universal Search results based on a user's ability to view a</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>particular piece of content without making a transaction. In other words, content in a channel that the user already subscribes to will appear higher in the search results than content behind an additional paywall or content with ads. The Roku Event Dispatcher is the vehicle used to allow Roku to determine a user's authenticated status.”</p> <p>https://developer.roku.com/docs/developer-program/libraries/roku-analytics-component.md</p> <p>“Like all televisions, the Roku TV’s antenna receives over-the-air signals from television broadcast stations, and these signals contain programming information. The Roku TV is also equipped with Automatic Content Recognition (ACR) technology that, when enabled, allows Roku to recognize the programs and commercials being viewed through the Roku TV’s antenna, and devices connected to your Roku TV, including cable and satellite set top boxes.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p>
1[b-3]	extract first user data specific to the user when the user accepts to stream the first media content item;	<p>“We receive information about your interactions with the Roku Services, such as your ... interactions with content and advertisements.”</p> <p>https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“We receive information about your activities within Roku’s Channels and Roku Direct Publisher Channels ..., like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files your play through the Roku Media Player.”</p> <p>https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Roku collects information about your online activities, including videos you search for and view, when you use Roku’s mobile app, in order to show you advertisements that we think may interest you on Roku’s and third</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>parties' online services, and for the other online advertising purposes.” https://docs.roku.com/published/mobileoptout/en/us</p> <p><i>See</i> Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198.</p> <p>“When you choose to use your voice to control your Player, you agree that Roku and third parties who fulfill your requests and/or provide services for us have your consent to record, process and store your voice inputs (e.g., a recording and the interpretation of what was said), and use such voice inputs with other information about your Player (e.g., device identifier) to provide services to you, to improve the accuracy and quality of the service, and as described in Roku’s Privacy Policy.” https://docs.roku.com/published/deviceplayereula/en/us</p> <p><i>See also</i> https://docs.roku.com/published/mobileapptermsofuse/en/us</p> <p>“When you access Roku’s Channels and Roku Direct Publisher Channels, we receive information about your activities like the videos and other content you select and view within these channels. If you use the Roku Media Player channel to view your video or photo files or listen to your music files, Roku will collect data about the files viewed within the Roku Media Player, such as codecs, and other metadata of the local files you play through the Roku Media Player.” https://docs.roku.com/published/userprivacypolicy/en/us#userprivacypolicy-en_us-CCPA</p> <p>“When you do not uncheck “Use this Info to enhance TV viewing” during device set up, or when you select “Use info from TV inputs” from the Settings menu, Roku will, through ACR technology, collect information about what you watch and when you watch (e.g., the programs,</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>commercials and channels you viewed, and the date, time and duration of the viewing) via your Roku TV's antenna, and devices connected to your Roku TV, including cable and satellite set top boxes. Roku will collect this information when you access live TV from any streaming channel. The Roku TV also sends back to Roku the data received through the TV antenna and the data about how you use the on-screen TV guide. When this setting is enabled, Roku may share your viewing data with third parties for measurement purposes -- for example, to help them understand the audience viewing the ads or programs, or to measure the effectiveness of the ads. Roku may also share data derived from this viewing data (for example., audience segments like sports fans, sitcom lovers, cord cutters, etc.) with its partners to make advertising more relevant to you.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p>
1[b-4]	generate a second request from the user to evaluate streaming a second media content item to the device;	See Evidence of Infringement for Claim Element 1[b-1].
1[b-5]	identify the second media content item by determining a second media fingerprint that identifies a second unique characteristic inherently present in the second media content item captured during the recorded creation of the second media content item, and excluding information introduced to the second media content item extraneous to the record creation;	See Evidence of Infringement for Claim Element 1[b-2]
1[b-6]	extract second user data specific to the user when the user declines to stream the second media content item;	<p>“Viewership Details table</p> <p>The Viewership Details table shows the number of visits, streams, streaming hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.</p> <p>The number of streams can be expected to be higher in channels with shorter form content, such as 1-5 minute user-generated videos, than in channels with longer form content, such as feature length films.</p> <p>Streams can generally be expected to exceed visits. If visits exceeds streams, that would indicate account holders are starting your channel, then exiting without ever streaming any content. https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Your selection will not affect data collected when you access or stream content over the Internet. For example, Roku will still collect and may share other information about your use of streaming channels on your Roku TV</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>(i.e., channels that you have downloaded through Roku's streaming service or channels that Roku pre-installed on your Roku TV to stream content over the Internet). Disabling this feature will not affect your receipt of personalized ads, or ad and program measurement on Roku TVs or elsewhere. Visit Limit Ad Tracking in your Roku TV's settings menu to learn about options regarding sharing of streaming channel viewing data and personalized ads on this Roku TV. To learn more about Roku's practices, see the Roku Privacy Policy. Also, operators of the streaming channels that you install on your Roku TV may collect information about your use of their channels. See their respective privacy policies to learn more.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p> <p>“Visits and Streams visualization This visualization shows the number of times a channel has been launched and the number of times content has been streamed within that channel. When someone launches a channel, that counts as one visit (this is sometimes called a session, as in web analytics). Duration does not factor into visit counts. Starting a channel and immediately exiting would still count as one visit.</p> <p>A stream is counted every time a stream is opened (i.e. a user presses play). If a user stops and starts a title multiple times, that will be counted as multiple streams. Multiple streams can be associated with the same title but multiple title cannot be associated with the same stream.”</p> <p>https://developer.roku.com/docs/features/analytics/viewership-summary.md</p> <p><i>See also</i> Hooman Mohajeri Moghaddam, et al., Watching You Watch: The Tracking Ecosystem of Over-the-Top TV Streaming Devices (2019), https://dl.acm.org/doi/pdf/10.1145/3319535.3354198 (discussing tracking of triggering of video playback for Roku).</p>
1[b-7]	aggregate the extracted first user data into a first statistics record and the	<p>“Viewership Details table The Viewership Details table shows the number of visits, streams, streaming</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
	<p>extracted second user data into a second statistics record, wherein the first statistics record summarizes the first user data and the second statistics record summarizes the second user data; and</p>	<p>hours and rebuffers per streaming hour by Roku device. The hardware is identified by the Roku codename. The Roku model number is provided next to the hardware name, see Roku Models and Features for the list of hardware and model numbers.</p> <p>Click a column header to sort by that column. Click on the "more" icon (three dots) on the far right side of the name bar on this table to download it. The download includes additional product details along with the table.</p> <p>Viewership Details on Viewership Summary</p> <p>Screenshots have been included for illustrative purposes only, and some values have been intentionally blurred out to avoid any misinterpretations.” https://developer.roku.com/docs/features/analytics/viewership-summary.md#</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.”</p> <p>https://developer.roku.com/docs/features/analytics/audience-insights.md</p>
1[b-8]	transmit to a database the first and second statistics record with the identities of the first and second media content items determined by the first and second media fingerprints so that the summarized first and second user data is accessible to a third party online retailer for	<p>“Channel Engagement report</p> <p>The Channel Engagement report is the default that displays when you choose View Analytics. Use this report to grow your audience by analyzing data about streaming activity and the size of your install base.</p> <p>...</p> <p>Summary statistics</p> <p>The band of metrics below FILTERS shows the summary statistics based on the time period you select in FILTERS:</p> <p>New Installs - total count of new unique accounts during the selected Time Period.</p> <p>Uninstalls - total count of accounts uninstalled during the selected Time Period.</p> <p>Cumulative Installs To-Date - count of unique accounts that that have installed your channel to-date; roughly equivalent to the size of your install base. When users uninstall and re-install a channel, this is credited as one net new installation and will increase the Cumulative Installs To-Date.</p> <p>Average Daily Viewers - average number of daily views similar to DAU "daily active users." Changing Time Grain will not effect this measurement.</p> <p>Average Minutes Per Viewer - average number of minutes streamed per unique streaming accounts.</p> <p>Total Hours Streamed - total hours streamed during the selected Time Period.”</p>

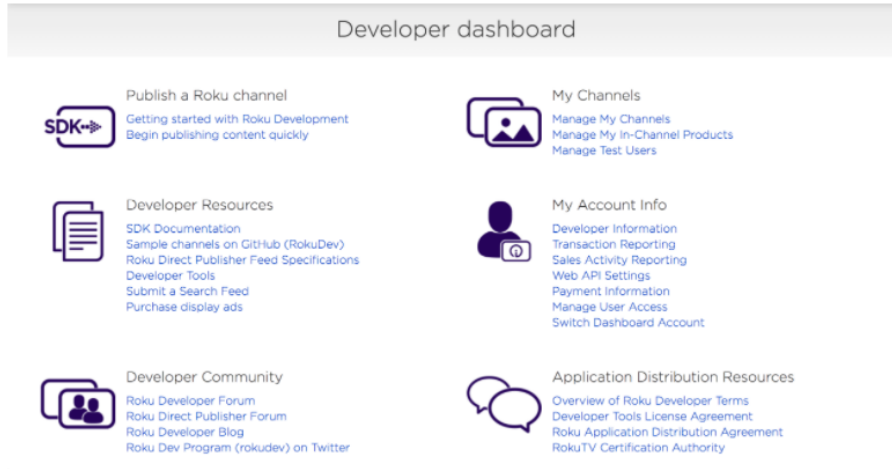
'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>https://developer.roku.com/docs/features/analytics/channel-engagement.md</p> <p>“However Roku doesn’t sell most of the ads that run on its platform; most of it is sold by the publishers on the platform, said Roku gm of platform Scott Rosenberg on the earnings call.</p> <p>Enabling publishers to control ad sales on their channels has helped Roku to win favor with media companies, especially as more launch their own OTT apps. In June the company debuted Roku Audience Marketplace, a program for publishers to sell ads in their Roku channels that can be targeted using Roku’s first-party data and ad tech. And Roku has played a supporting role by selling ads for smaller publishers’ channels and splitting that revenue and striking deals with larger publishers to sell some of their inventory or to fill their unsold inventory.”</p> <p>https://digiday.com/future-of-tv/rokus-advertising-business-outpacing-hardware-business/</p> <p>“Like all televisions, the Roku TV’s antenna receives over-the-air signals from television broadcast stations, and these signals contain programming information. The Roku TV is also equipped with Automatic Content Recognition (ACR) technology that, when enabled, allows Roku to recognize the programs and commercials being viewed through the Roku TV’s antenna, and devices connected to your Roku TV, including cable and satellite set top boxes.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p> <p>“When you use a Roku TV with the Smart TV experience enabled, we use Automatic Content Recognition (“ACR”) technology to receive information about what live television content you watch via the Roku TV’s antenna, and what you watch via devices connected to your Roku TV, including cable and satellite set top boxes. For example, we receive TV viewing information such as the programs, commercials, and channels you view, the</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>date, time and duration of the viewing, and how you use the on-screen TV guide. We receive TV viewing information both when you access live TV directly through your Smart TV's interface and when you access live TV from within a Third-Party Channel. If the Smart TV experience is enabled on your Roku TV, we will use this information to personalize your TV viewing experience and ads.”</p> <p>https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>“Model #3 This model utilizes Roku's Event Dispatcher library that allows channels to share in-app user behaviors and events with Roku by inserting custom tracking pixels into the channel. The Event Dispatcher enables Roku to customize the Universal Search results based on a user's ability to view a particular piece of content without making a transaction. In other words, content in a channel that the user already subscribes to will appear higher in the search results than content behind an additional paywall or content with ads. The Roku Event Dispatcher is the vehicle used to allow Roku to determine a user's authenticated status.”</p> <p>https://developer.roku.com/docs/developer-program/libraries/roku-analytics-component.md</p> <p>“Like all televisions, the Roku TV's antenna receives over-the-air signals from television broadcast stations, and these signals contain programming information. The Roku TV is also equipped with Automatic Content Recognition (ACR) technology that, when enabled, allows Roku to recognize the programs and commercials being viewed through the Roku TV's antenna, and devices connected to your Roku TV, including cable and satellite set top boxes.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
1[b-8-i]	retrieving the first and second statistics record with the identities of the first and second media content items determined by the first and second media fingerprints,	<p>Developer Dashboard</p> <p><i>Managing channels, products, test users, and analytics</i></p>  <p>The Developer Dashboard contains many useful features such as submitting and updating channels, managing test users, and an assortment of channel engagement or Roku Pay transactions reports.</p> <p>https://developer.roku.com/docs/features/dashboard/overview.md</p> <p>“Like all televisions, the Roku TV’s antenna receives over-the-air signals from television broadcast stations, and these signals contain programming information. The Roku TV is also equipped with Automatic Content Recognition (ACR) technology that, when enabled, allows Roku to recognize the programs and commercials being viewed through the Roku TV’s antenna, and devices connected to your Roku TV, including cable and satellite set top boxes.”</p> <p>https://docs.roku.com/published/acrservicepolicy/en/us</p> <p>“When you use a Roku TV with the Smart TV experience enabled, we use Automatic Content Recognition (“ACR”) technology to receive information</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		<p>about what live television content you watch via the Roku TV's antenna, and what you watch via devices connected to your Roku TV, including cable and satellite set top boxes. For example, we receive TV viewing information such as the programs, commercials, and channels you view, the date, time and duration of the viewing, and how you use the on-screen TV guide. We receive TV viewing information both when you access live TV directly through your Smart TV's interface and when you access live TV from within a Third-Party Channel. If the Smart TV experience is enabled on your Roku TV, we will use this information to personalize your TV viewing experience and ads."</p> <p>https://docs.roku.com/published/userprivacypolicy/en/us</p> <p>"Model #3 This model utilizes Roku's Event Dispatcher library that allows channels to share in-app user behaviors and events with Roku by inserting custom tracking pixels into the channel. The Event Dispatcher enables Roku to customize the Universal Search results based on a user's ability to view a particular piece of content without making a transaction. In other words, content in a channel that the user already subscribes to will appear higher in the search results than content behind an additional paywall or content with ads. The Roku Event Dispatcher is the vehicle used to allow Roku to determine a user's authenticated status."</p> <p>https://developer.roku.com/docs/developer-program/libraries/roku-analytics-component.md</p> <p>"Like all televisions, the Roku TV's antenna receives over-the-air signals from television broadcast stations, and these signals contain programming information. The Roku TV is also equipped with Automatic Content Recognition (ACR) technology that, when enabled, allows Roku to recognize the programs and commercials being viewed through the Roku TV's antenna, and devices connected to your Roku TV, including cable and satellite set top boxes."</p>

'154 Patent – Claim 1
Preliminary Claim Chart

Claim Element	Claim Restriction	Evidence of Infringement
		https://docs.roku.com/published/acrservicepolicy/en/us
1[b-8-ii]	analyzing the retrieved first and second statistics record to determine a target demographic of the first and second media content items based on a demographic corresponding to the first and second user data, and	<p>“Nick Feamster: It’s a variety of things. I think one of the things that we found surprising was that some of the channels that we looked at, we found them sending quite detailed information, including the video title. So exactly the title of the show or the video that you were watching. Of the 2,000 channels that we looked at on Roku and Amazon, many of them sent back unique identifiers, something called an ad ID. And many of them also sent back other more detailed information, including the serial number of the device, as well as, your city, state, and zip code in some cases.”</p> <p>https://www.sciencefriday.com/segments/smart-tv-roku-spying/</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p> <p>A channel audience is defined as all of the active users for given channel,</p>

'154 Patent – Claim 1
Preliminary Claim Chart

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		and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.” https://developer.roku.com/docs/features/analytics/audience-insights.md
1[b-8-iii]	providing the third party online retainer the target demographic to market the media content item to a plurality of other users corresponding to the target demographic of the media content item.	<p>Introducing OneView™ Ad Platform, the Ad Platform built for TV streaming.</p> <p>OneView Ad Platform includes:</p> <ul style="list-style-type: none"> ● Cross-device identity – access the largest TV audience dataset powered by deterministic consumer data ● Linear TV insights – plan and measure using unique linear TV data from more than 20 million homes ● Proprietary audiences – activate more than 100 unique segments based on behavioral insights from the number one streaming platform in the US ● Forecast OTT instantly – calculate OTT ad inventory availability in seconds ● In-flight attribution – manage reach, frequency and performance across OTT, desktop, mobile and linear TV ● Guarantee outcomes – guarantee certain demographic delivery or business outcomes like website visits or mobile app downloads <p>https://advertising.roku.com/Advertiser-Solutions</p> <p>“Channels have access to web-based channel analytics through Roku's Developer Dashboard. This allows you to analyze your channel's health, viewership trends, and metrics for specific titles and devices.</p> <p>As a service to our partners, Roku provides some basic analytics for all</p>

'154 Patent – Claim 1
Preliminary Claim Chart

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		<p>channels on the platform in the form of standardized dashboards with metrics on channel health, viewership and engagement, and so forth. Dashboards are read-only - meaning users cannot modify the dashboards themselves (apart from applying filters), create new dashboards, or change any of the underlying data. Also, the channel data displayed are restricted to channel owners. You will never see data pertaining to channels other than your own, and Roku will never share your channel data with other channel owners. Roku evaluates making changes to the available dashboards on an ongoing basis, based on feedback from our channel partners. Access to some dashboards may be restricted based on the size of the business relationship.”</p> <p>https://developer.roku.com/docs/features/analytics/analytics-reports.md</p> <p>“Audience Insights report The Audience Insights report tells publishers about the demographics of their channel audiences using first-party data.</p> <p>The interests and preferences revealed in the Audience Insights dashboard can help channel owners with content management and product planning. For example, if a content manager sees growing activity within their channel among college-educated individuals aged between 30 and 44 years who also spend a large amount of their time streaming in news and comedy channels, she may choose to start programming her channel with more political satire.</p> <p>For channels that monetize with video advertisements, the Audience Insights report can also be used as an ad sales enablement tool. Consider an ad sales manager who sees that 40% of the viewers of his channel are young men aged between 25 and 34 years with an average income between \$175-250,000 a year who also spend time streaming in sports and fitness channels. He would be wise to sell ad placements in his channel to high-end sports apparel brands.</p>

'154 Patent – Claim 1
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		<p>A channel audience is defined as all of the active users for given channel, and an active user is any account that has streamed content for greater than zero seconds in the past 30 days in that channel.”</p> <p>https://developer.roku.com/docs/features/analytics/audience-insights.md</p>